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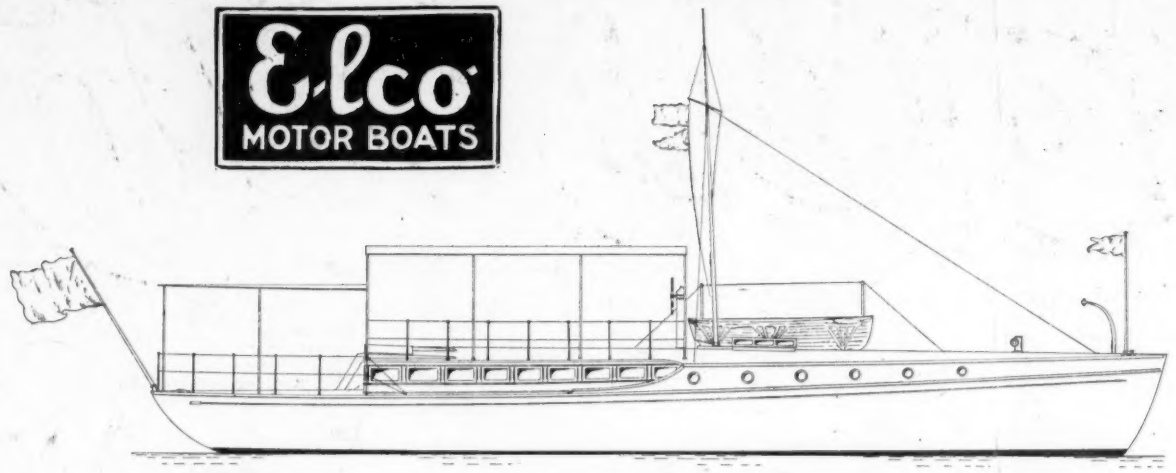

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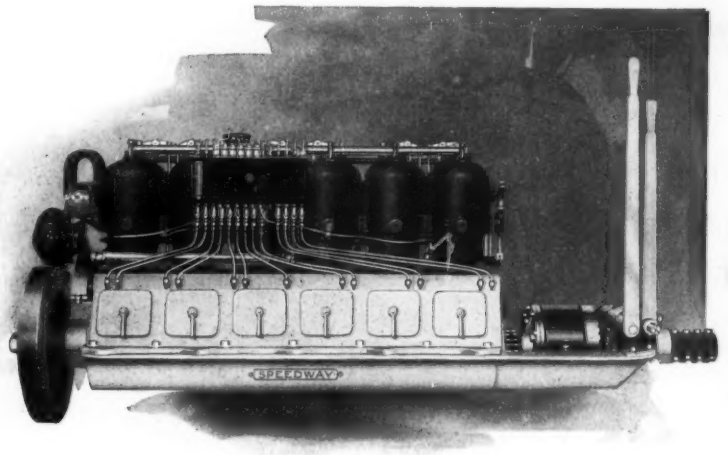

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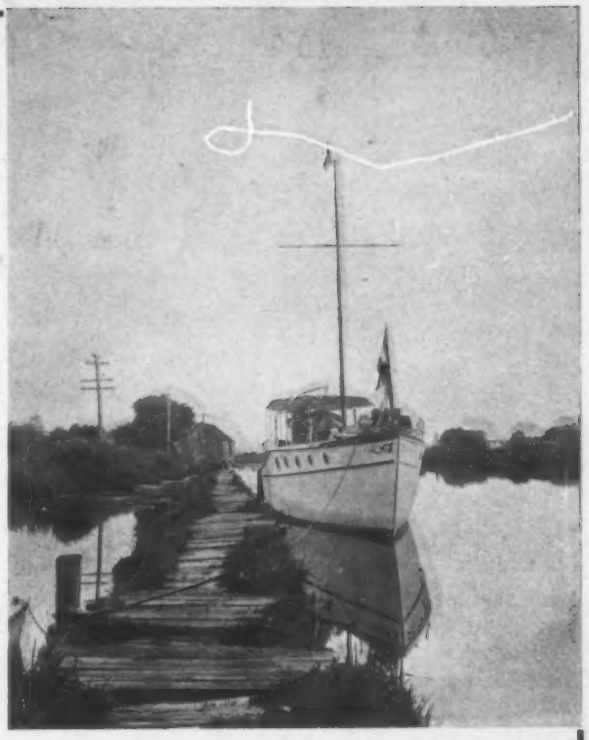

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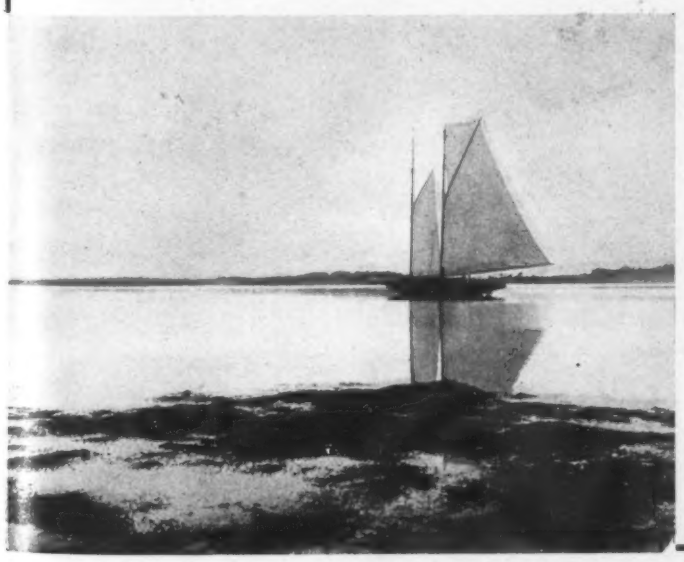

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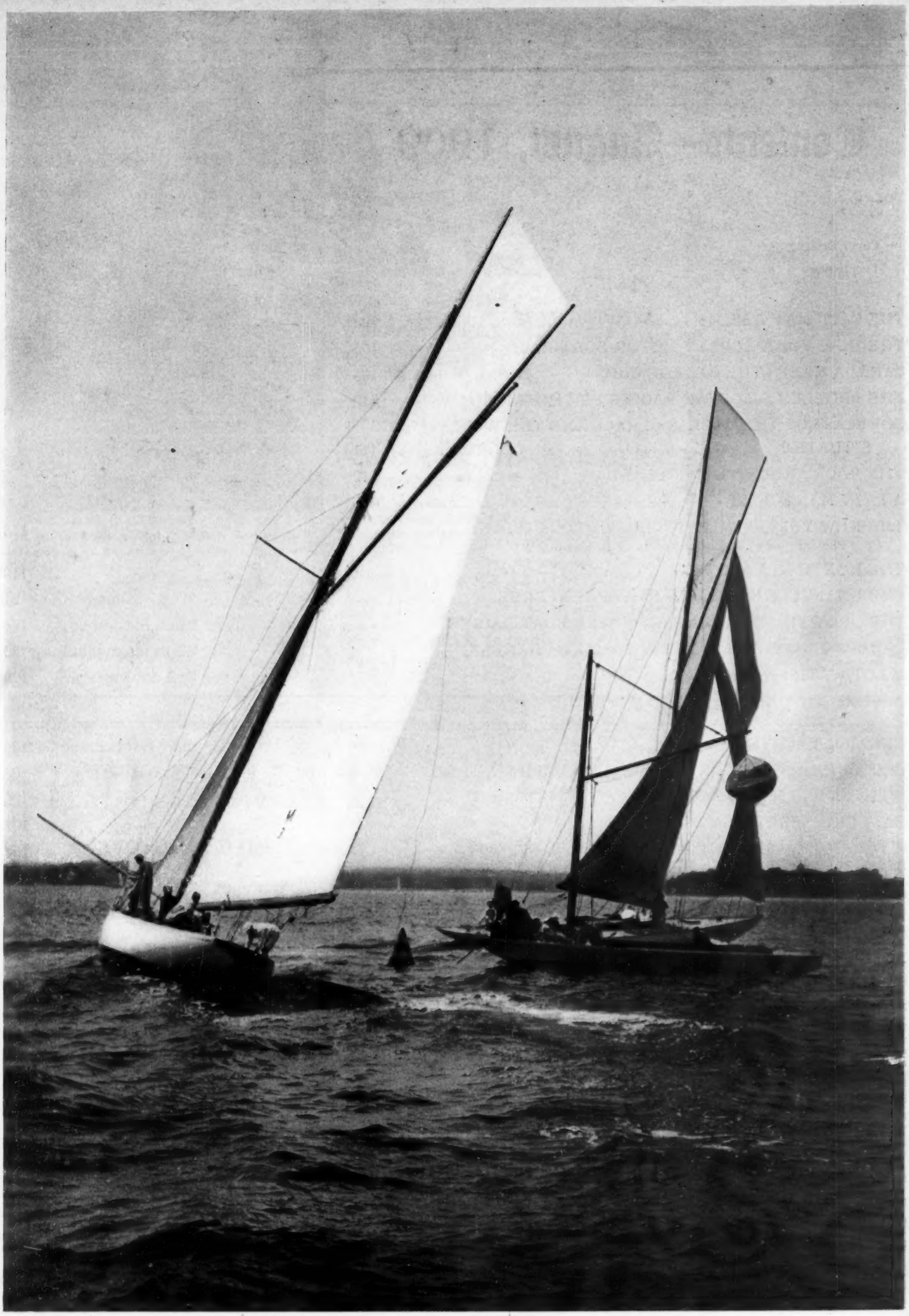

A MATTER OF SECONDS. LORELLO AND GARDENIA TURNING THE STAKE BOAT AT LARCHMONT.

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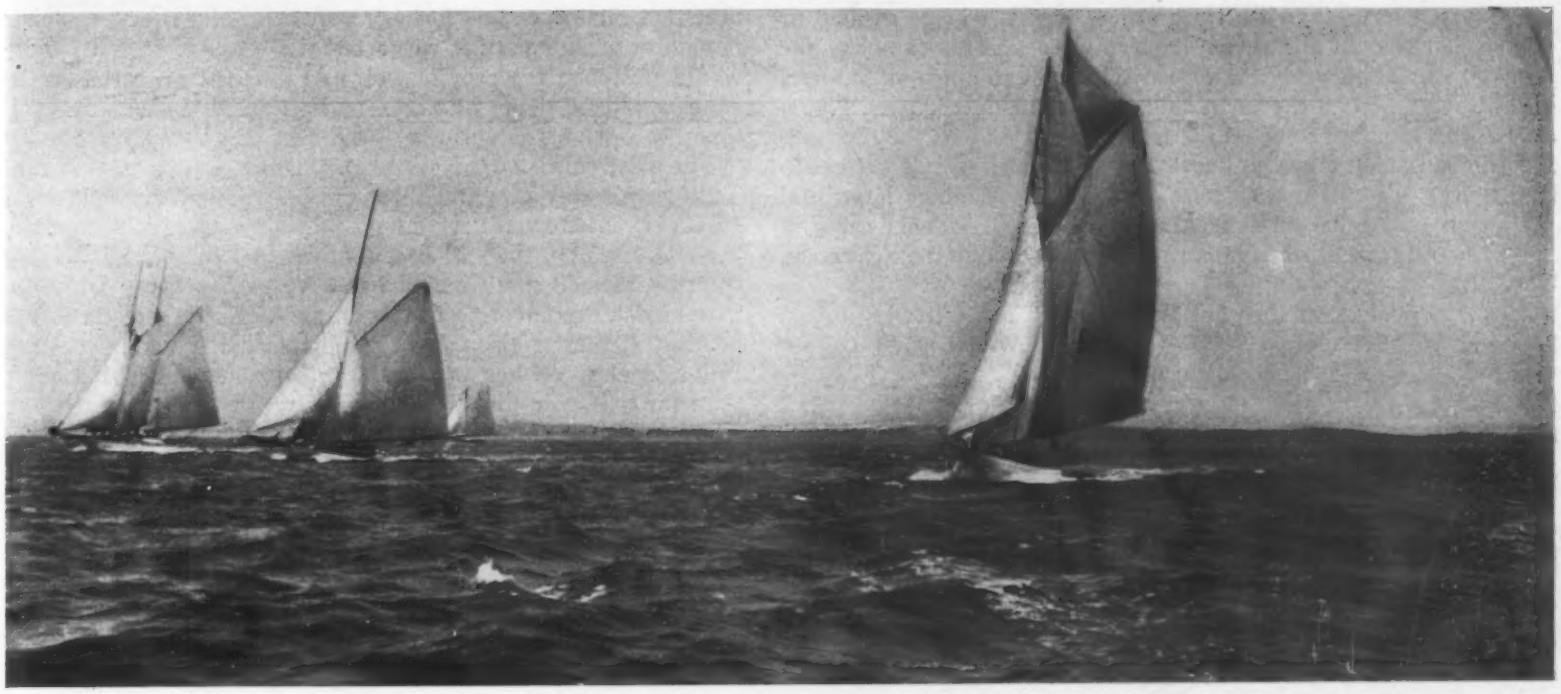


IN A STIFF NOR'WESTER THE BOATS HAD A BROAD REACH TO THE SOUTHWEST SPIT

The Cape May Race

By L. DeB. HANDLEY

Photographs by the Author and E. Levick

THE ocean yacht race for the Croker Cup of 1909 was sailed on July 3 over the Cape May Course, a distance of 301 nautical miles, under the auspices of the Brooklyn Yacht Club. Although not as sensational an event as the memorable race of a year ago for the Lipton Cup, it was nevertheless marked by many interesting features.

That the long list of early entries dwindled down to only seven by the eve of the race was distinctly disappointing, but it must be remembered that in last year's contest nine of the nineteen starters were disabled before they even reached the open, and the effect of such a catastrophe is not forgotten in a hurry. The seven boats which reported for the race were: Commodore W. C. Towen's Tammany, L. J. Callanan's Eclipse, Rear Commodore L. S. Herzig's Gardenia, General David E. Austen's Ondawa, John Lewis' Vigil, Dr. D. R. von Forreger's Adyta II and Fred. R. Thompson's Shamrock, winner of last year's race. A most unfortunate accident to the latter further reduced the fleet at the last moment. As she left her moorings to go to the line, an ugly puff of wind broke her fore gaff and forced her to anchor. The committee postponed the warning gun, hoping that the broken spar might be replaced; but when it was learned that it might take several hours to repair the damage, it was decided to send off the fleet, as the owner of Eclipse had begged for a prompt start, pleading important engagements on the Sound during the following week. The occurrence was most regrettable, for it was unquestionably Shamrock weather, and Mr. Thompson had gone to a deal of trouble to get his boat ready.

Weather conditions mean everything in a yacht race, and they must, of course, be taken as the fortunes of war, but one cannot help feeling that the total absence of windward work in the Cape May event was unsatisfactory. The true test of a boat's worth lies in her ability to go to windward, and a race sailed entirely before the wind lacks something. In the half gale that blew during most of the contest and with the sea running high, the smaller boats were hopelessly handicapped in a reach.

It is hardly conceivable that the wind should shift so crazily as to make of the twisting and doubling Cape May course practically one long reach. Yet such was the case, and the two giants of the fleet, the schooners Eclipse and Tammany, had everything their own way. True, both were splendidly handled and made the most of their opportunities, but conditions also favored them. Reaching is a schooner's best point, and in a sea-way, with plenty of wind, length of waterline is bound to tell.

Gardenia, although beaten badly by the two leading boats, made a wonderful run and came in for a good share of the glory. Before the race, her owner was subjected to no end of chaffing for entering what it pleased his friends to call a "paper boat" in an ocean race. The truth of the matter is that many of our present-day racing boats are *boats* from pennant to keel, not speed freaks, and Mr. Herzig knew by experience what Gardenia could do. Like the staunch little Mimosa III a year ago, she was driven hard all the way, yet, when it was over, she showed no trace of the forty-six-hour punishment that had been administered to her. She stood the strain nobly, and it was a pity there was not some windward work in which she could offset the advantage gained by her adversaries in reaching. Results might then have been different.

The crippling of Adyta II as she neared Scotland Lightship

was another regrettable occurrence of the race. Her backstay parted in a heavy gust and her tall topmast, burdened with the weight of a huge balloon jib, snapped off suddenly like the stem of a clay pipe, so that she had to abandon the contest and put back.

Almost every other boat in the fleet reported some mishap or other, but five of the seven starters were able to complete the course, which this year was very wisely made to finish at Scotland Light instead of off the yacht club, as in 1908.

Eclipse was first to cross the finish line at 3.13 on the morning of July 5, having taken 39 hours and 43 minutes to sail 301 nautical miles. Tammany was next to arrive, 41 minutes later, and captured first prize on time allowance. The Gardenia came in at 9.40, and took third. Ondawa finished at 1.59 in the afternoon, and Vigil at 5.20.

Full particulars of the race are shown in the following table:

Length overall	Yacht.	Owner.	Rig.	Allowance.	Finish July 5.	Elapsed Time.	Corrected Time.
74 feet	Tammany.....	W. C. Towen.....	schooner.....	3.42.21	3.54A	40.24	39.01.33
85 feet	Eclipse.....	L. J. Callanan.....	schooner.....	2.20.24	3.13A	39.43	39.43.00
60 feet	Gardenia.....	L. S. Herzig.....	sloop.....	4.19.15	9.40A	46.10	44.11.09
52 feet	Ondawa.....	D. E. Austen.....	sloop.....	5.04.32	1.59P	50.29	47.44.42
61 feet.	Vigil.....	John Lewis.....	schooner.....	5.09.00	5.20P	53.50	51.01.24
40 feet	Adyta II.....	R. von Foregger..	sloop.....	4.31.18	Disabled		

The clever handling of Rear Commodore Herzig's Gardenia this season has so often been a matter of comment on Long Island Sound that an invitation to sail on her in the Cape May race was decidedly welcome. There is something fascinating about going into a cruising event on a trim little racing craft, and it is hard to understand why people should consider it foolhardy to do so. The present rules certainly insure seaworthy models. As to Gardenia, it should be remembered that despite her great racing record she was built for a cruiser. Indeed, no man could wish for a better boat under him at sea. When we started for North East End Light, she was in perfect cruising trim, with every bit of rigging tried, and she proved as comfortable and staunch as any craft the writer was ever aboard of. Many a heavier-built ocean-goer has opened up under less pounding than the pretty Gardner sloop suffered on her two days' sail, yet, when she rounded up to her moorings in Gravesend Bay on Monday morning, not a seam was started nor a speck of paint missing from her good, old sides.

TAMMANY, THE WINNER ON CORRECTED TIME

Reporting on board during the early hours of July 3, I found the crew busily tying a reef in Gardenia's mainsail, under the direction of Captain Nelson, her skipper, for a stiff northwester was blowing, and it would have been reckless to start under full sail.

Gardenia's working forces consisted of an afterguard of four—the owner, "Bill" Young, Jim Hansen and the writer; a professional crew of four, and that most jovial of harbor pilots, Eugene McCarthy, who was to navigate.

As I shed city apparel, I noted the business-like manner in which things were being done and was agreeably impressed by the quiet way in which skipper Nelson ran his crew. He hardly spoke above a whisper, yet Corinthians and professionals jumped to execute his orders with lightning-like speed. I began then to understand the system that had enabled Gardenia to win five straight victories against heavy odds.

While we prepared to hoist sail, the news spread among the fleet that Shamrock had lost her fore-gaff, and it was decided to remain at anchor until it was ascertained whether the committee would postpone the race or not. At 10.40 word came that the start would be made at 11.30, and we were under way by the time the warning signal was given.

The fleet consisted of six boats; three schooners — Eclipse, Tammany and Vigil; and three sloops—Gardenia, Ondawa and Adyta II. There was very little jockeying for positions; too much was at stake. In the stiff breeze crews had their hands full, and skippers seemed more inclined to give each other a wide berth than to risk maneuvering in close proximity. As the starting gun boomed, Captain Nelson shot Gardenia over the line first, Ondawa followed close on her weather and Tammany under her lee.

In the half gale that was blowing from the north-northwest it was a broad reach to the first mark, the South West Spit buoys, with booms to port. On most boats ballooners were broken out immediately, and the fleet made a pretty picture foaming along with kiting sails and every inch of canvas drawing.

Before we had covered half of the first leg of the course, the wind began to moderate, and the skipper ordered our reef shaken out. Although this was swiftly and neatly done, Eclipse passed us first, then Tammany, and in this order we reached the South West Spit. Here Eclipse would not venture a jibe, and went about, losing enough time to allow Tammany to pick her up, then Gardenia jibed nimbly inside of both, and, all three on a line, we started for Scotland Light at 12.15.

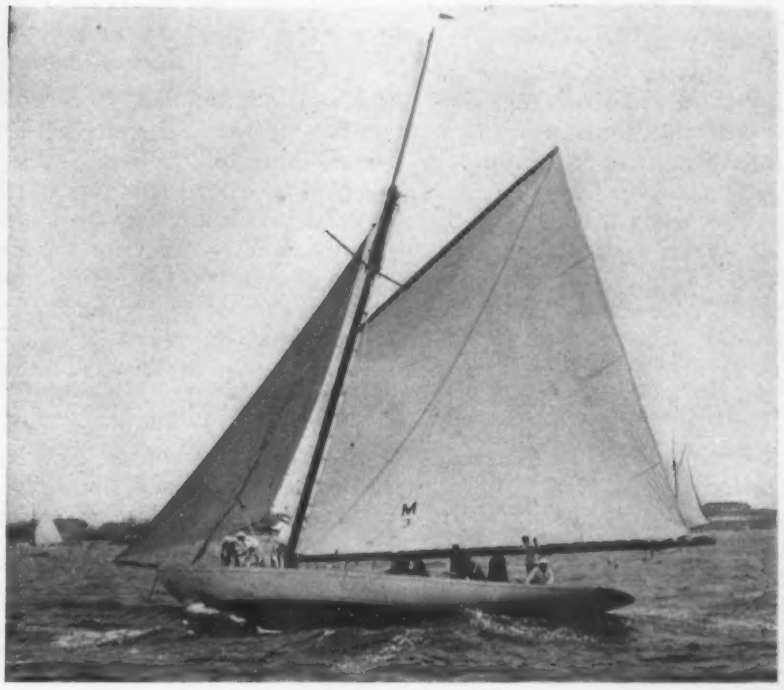
Prompt action in setting spinnaker here gave us the lead, but Eclipse soon broke out hers, and then her great, flat hull passed on in front, leaving us as if standing still. We held Tammany running, however, and were still in second place when we rounded Scotland Lightship at 12.51.

The next leg was a balloon-jib reach to Fire Island Lightship, and we could see Commodore Towen smiling as Tammany bore down on us with foaming flanks, a monster ballooner kiting forward, a still larger main topmast staysail bellying out amidships. She must have been tearing off eleven or twelve knots easily—and this speed is out of the question on a 39-foot waterline, especially in a following sea that makes it impossible to keep the boat from yawing—so we were soon looking at her stern.

About 3.30 someone shouted that Ondawa had lost her topmast and was in trouble, but we learned afterward that it was Adyta II, and not Ondawa. Our ship's clock gave the times of the leaders around Fire Island Lightship: Eclipse, 4.11.30; Tammany, 4.22.15; Gardenia, 4.34.20.

Booms were swung to port in rounding the mark, and we found on laying our course for North East End Lightship that balloon

DECK OF GARDENIA DURING THE RACE



GARDENIA STARTED WITH A SINGLE REEF

TAMMANY CROSSING THE LINE. SPLICING THE PEAK HALYARDS. TICKLISH WORK.

jib would draw. Tammany was experiencing difficulties with her head sails and put into the wind repeatedly. Eclipse was gaining steadily on us both, her enormous spread of canvas doing yeoman's duty and carrying her along at a great rate.

As the afternoon waned, the wind kept on increasing and the seas rose steadily. Out of New York Bay they came, running high, and with all sails set we were ploughing along in a smother, half the deck awash. The working topsail was doused; but it hardly seemed to make any difference, so the balloon jib first, and then the staysail, followed suit. Even under mainsail and jib the rail was under, and the waves washed over the bow and piled up on the stern until there was not a dry spot, even in the cockpit.

Towards evening the wind gave hint of letting up, and immediately sail was crowded on. Captain Nelson proved an ideal racing skipper. It was never too much trouble for him to hoist or lower canvas. He knew to a dot what Gardenia could stand and he made her stand it; but he was too good a sailor to be reckless, and he was too much a master of his trade not to appreciate how poor a policy it is to smother a racing boat with too much canvas.

Sunset brought more wind, and when night closed in we were careening along again at a mad pace under jib and mainsail. The moon rose soon after, illuminating as beautiful a rough-water scene as was ever painted. Huge, broken waves came running upon us and rolled by, their spray-topped crests sparkling in the moonlight, their sides a lacework of windswept ripples. And they smashed about the glistening body of Gardenia in great masses of foam that flew high, and then crashed on deck, drenching us from head to foot, and sluicing noisily along the windward combing. It was glorious sailing, and one sat watching the beautiful sight, fascinated by the madness of the race and thrilled by its weirdness. It was not until near midnight, when the breeze began to moderate, that the work of the day began to tell and one's lids felt heavy. Cold, hungry and wet to the skin, the padded bunks felt luxuriously comfortable.

At 1.55, when we held Absecom Light abeam, the wind had lightened sufficiently to allow us to carry full canvas. Day broke in a glory of crimson tints, and McCarthy was soon up in the spreader looking for sails. At 4.30 he sighted Eclipse, and then, a few minutes later, Tammany. Both had rounded the mark and were homeward bound. We made out North East End light astern of them shortly afterward, and, hoisting spinnaker, ran down on it with only a slight change of course. At 5.27 we swung around the ship and heard that Eclipse had a lead of one hour and twenty-four minutes on us—not much if we found our own weather going home, but a hopeless lead if there was more reaching to be done.

In heading for Fire Island, we discovered to our chagrin that the breeze had just shifted enough to permit a comfortable laying of the course with lifted sheets, and was blowing stiffly enough to put our rail under with only lower canvas set. The sea had not had time to change, though, and now hit us crossways over the starboard bow, hammering us with bitter violence. It was rough treatment for a craft used to the sunny weather of Long Island Sound, but I have never seen a small boat ride it better. At times Gardenia seemed to feel the harshness of the treatment and paused, hesitatingly, at some particularly ugly blow, shivering all through, but the next moment she would take the bit in her teeth and plunge forward determinately, making short work of the furious sea. Piercing the waves with

(Continued on page 156.)

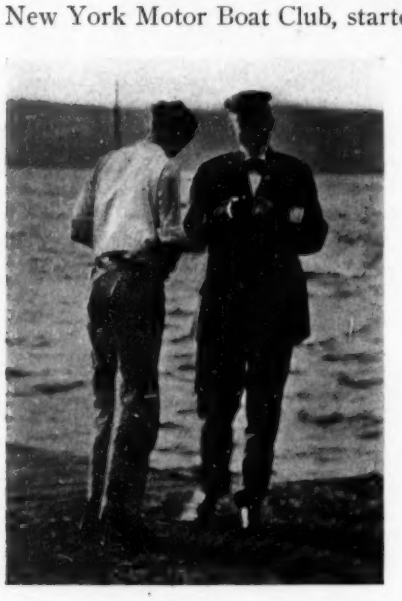
FOURTEEN BOATS STARTED IN THE LONG RACE FROM NEW YORK TO ALBANY AND RETURN.

The New York-Albany Motor Boat Race

A STIRRING CONTEST OF 270 MILES WHICH BROUGHT OUT THE CAPABILITIES OF THE SMALLER BOAT—THE SUCCESSFUL LAUNCHING OF A RACE THAT PROMISES TO BECOME AN ANNUAL EVENT

Photographs by E. Levick and E. T. Keyser

WITH a northwest wind blowing down and across the Hudson against the force of the flood tide, the contestants in the race from New York to Albany and return, of the New York Motor Boat Club, started at 7 p. m. on July 3.



F. D. GHEEN GIVING SOME FINAL INSTRUCTIONS.

The strong wind which held all day refused to go down with the sun, and a heavy swell, which broke into white caps, kept the committee boat anchored off the Club House pitching and rocking and gave promise of a lively time for the small open boats that were entered in the event.

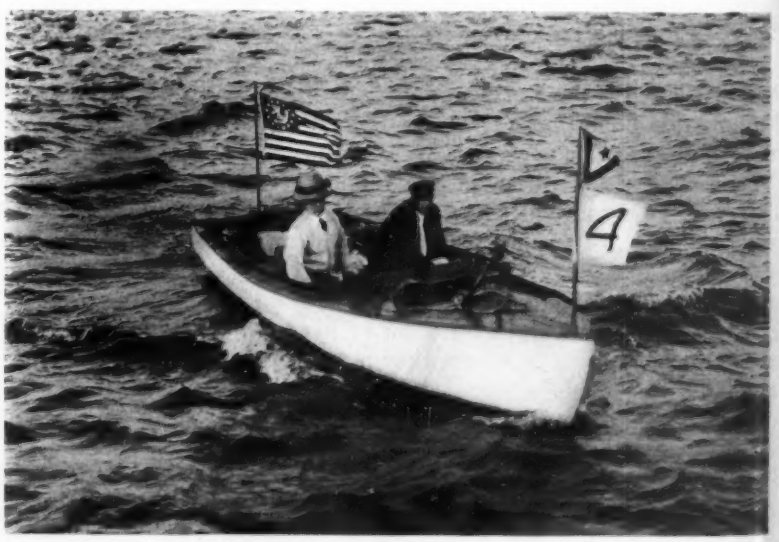
The skippers of some of the smaller craft certainly had their nerve with them, and the race demonstrated before it was over what the small open power boat is capable of in the way of long runs with rough water to negotiate. In fact, aroused to admiration by the gameness of the smaller competitors, the regatta committee decided, just before the start, to give a prize to every open boat that finished the course, no matter what her time.

The event was open to power boats of 40 feet or less, over-all length. The course was from off the New York Motor Boat Club House, at the foot of West 147th Street, to stake boats off the Albany Yacht Club House and return—a distance of 270 statute miles. All boats raced as one class and were rated under the 1908 A. P. B. A. rules, and no under-rated boat was allowed to start.

The first prize—the New York Motor Boat Club Cup—was presented to the boat making the best corrected time, and second and third prizes were given on corrected time, while a time prize was given for the best actual time made over the course. In addition to a shield, appropriately engraved, presented to every boat that actually finished, a prize for every open boat finishing was, as just mentioned, liberally donated by the regatta committee.

Boats operated by gasolene, kerosene or alcohol were eligible, but no ingredient to increase the power of the fuel was allowed. No paid pilots or navigators were allowed, and each boat's equipment had to comply with the Federal regulations. Any contestant could stop at any place for supplies or repairs, but disqualification followed a boat's proceeding under any but its own power. A good feature of the regulations required that each captain had to turn in a log giving the time of passing all prominent points, said log to be in the committee's hands within twelve hours after finishing.

The start was set for seven o'clock in the evening, and of the score or more of entries, fourteen appeared at the starting line. In the brisk wind and slop of a sea that was running the boats were well handled while maneuvering for the start, and, when the last gun was fired, the boats crossed the line in a bunch in one of the prettiest and most spirited starts ever seen in a power-boat race, showing that the skippers had judged the time and distance well. Bunk II was the first over the line, almost with the gun,



FRANCESCA, WHICH CARRIED THE ONLY WOMAN IN THE RACE, MRS. G. E. SPAULDING.

closely followed by Martha, which had won the Block Island Race two weeks before, and which looked fit for anything in the way of weather that might turn up. Then the others followed so quickly that it was hard to pick them out as they flashed by, while Reta brought up the rear.

MARTHA, WINNER OF THE EVENT.

Once started and going full speed into the head sea, the spray began to fly and oilskins were brought out, while the smaller boats went over to the west side of the river to find smoother water. Gradually, the more powerful boats drew ahead, and when darkness settled down over the fleet they were getting pretty well strung out.

At the mouth of the Tappan Zee, where the wind had a sweep from Hook Mountain on the north, a heavy sea was piled up and, added to the darkness, a number of the boats found the going too heavy for them. During the night, Talequah and Ida F had to give it up and turn back. The little Francesca, a light 23-foot open launch, which was manned by Mr. and Mrs. G. E. Spaulding, the latter the only woman in the race, kept bravely on, smashing into the heavy seas until the water, breaking over her, put the ignition system out of commission and she was helpless. Unable to reach shore, they drifted around on the troubled Hudson all night, and were finally picked up and towed in at 7 a. m. Sunday. As Poughkeepsie was reached, Consort had engine troubles and was obliged to put in there for repairs, and did not resume the race.

It was no child's work for the skippers and crews of open boats, who, wet by the flying spray as they drove into the seas, sat by wheel and engine all through the long night, the next day and through the ensuing night, but the event showed what the little boats will do, and the good time indicated for the 270 miles between the start and the finish shows what achievements the modern, wholesomely-built power boat is capable of.

The time of turning the mark at Albany on July 4 was as follows: Elmo II, 10.38 a. m.; Martha, 12.09 p. m.; Plough Boy, 12.19 p. m.; Jolly Roger, 12.50 p. m.; Bunk II, 1.03 p. m.; Juliet, 1.55 p. m.; Polar Star, 1.40 p. m.; Reta, 1.10 p. m.; Anna, 1.29 p. m

The run back took all of the next day and the following night. The first boat to finish was the Elmo II, which crossed the line at 1.50 a. m., July 5. The second boat across was Martha, which finished at 3.45 a. m., and turned out to be the winner with corrected time of 24 hours and 33 minutes against Elmo II's corrected time of 24 hours and 48 minutes.

The following table shows the elapsed and corrected times of the contestants with their positions:

Boat.	Owner.	Allowance.	Elapsed Time.	Corrected Time.
1. Martha	Paul Kossek	8 H. 12 M.	32 H. 45 M.	24 H. 33 M.
2. Elmo II	F. Giles	6 H. 02 M.	30 H. 50 M.	24 H. 48 M.
3. Plough Boy	A. Sauer	8 H. 23 M.	33 H. 26 M.	25 H. 03 M.
4. Polar Star	R. Croft	8 H. 55 M.	36 H. 30 M.	27 H. 35 M.
5. Jolly Roger	F. Horenburger	4 H. 09 M.	33 H. 46 M.	29 H. 37 M.
6. Bunk II*	Meakim & Firth.	4 H. 37 M.	34 H. 50 M.	30 H. 13 M.
7. Imp*	A. Haas	8 H. 52 M.	40 H. 10 M.	31 H. 18 M.
8. Reta	G. C Trede	5 H. 13 M.	36 H. 34 M.	31 H. 20 M.
9. Juliet	F. Detering	4 H. 02 M.	36 H. 15 M.	32 H. 13 M.
10. Anna*	E. T. Woodward.	3 H. 26 M.	36 H. 46 M.	33 H. 20 M.

Ida F, Talequah, Francesca, Consort, did not finish.

* Indicates open boat.

Martha, which won the first prize, is a fine boat of the raised deck type. She is 30 feet long over all by 8 feet beam, and has a 2-cycle 5 x 5 Watertown engine. This is her second win of a long-distance race in two weeks, a record to be proud of. Elmo II, winner of the second prize and the time prize, is a fine type of sea-going boat built this spring, with the Marblehead race in view. Plough Boy won the third prize, while Bunk II took the prize for open boats. Jolly Roger, which finished just behind Plough Boy, is a 35-foot cruiser built this spring, and ran a very consistent race.

The New York Motor Boat Club is to be congratulated on having successfully carried to a finish the best contested and most practical motor boat race held thus far this season. The good fellowship that prevailed, the lack of bickering and quibbling, both in the preliminaries and the final decisions, showed a sportsmanlike spirit on the part of the contestants and a practical judgment on the part of the regatta committee which are a credit to each and every contestant in the race and to Messrs. Gheen, Little, Rogers and Chapman of the committee.

ANCHORAGE OF THE NEW YORK MOTOR BOAT CLUB—JOLLY ROGER IN THE FOREGROUND.

CLUB HOUSE OF THE NEW YORK MOTOR BOAT CLUB, WHICH HANDLED THE RACE.

Canada Keeps the George Cup

STRUGGLE FOR LAKE ONTARIO TROPHY THE CLOSEST EVER RECORDED, AND WATERTOWN CHALLENGER CAME WITHIN SIX INCHES OF WRESTING VICTORY FROM THE WINNER—BATTLE BETWEEN THREE BOATS

By C. H. J. SNIDER

THOSE who saw the series of races for the George Cup at Kingston, on Lake Ontario, early in July, got better value for their money than yachtsmen who have attended all other international races in the last decade or so. The fate of the cup was in doubt up to the very last minute of the very last race, and after that it got down to a question of seconds, and finally, split-seconds. The margin by which Kathleen, of Kingston, saved the cup was the narrowest the writer has ever witnessed, and he has so far failed to find anyone who has seen a smaller division of time or space between the winning boat and the loser.

For this final race the conditions were strikingly different from the first two. The wind was blowing a stiff breeze from the northwest, giving all the yachts could stagger under with whole sail. The course was shortened, making a leeward run of 2 2-3 miles, and a beat back, to be sailed twice over. The peculiarities of the starting line, and the order, "All buoys to port," took the yachts over with sails broad off on the port side, necessitating an immediate jibe. Whirl, of Toronto, was first over, she and Crescent, of Watertown, N. Y., crossing practically on gunfire, but though Kathleen was almost abreast of them at the time, she was slow gathering way and passed the buoy 25 seconds astern. All immediately jibed, and Whirl and Kathleen set spinnakers. Whirl laid a beautiful course for the leeward mark, never altering it once and keeping her sails splendidly filled. Kathleen ate to windward quickly and had to make most of the run plumb before it, while Crescent, not caring to set a spinnaker owing to the strength of the wind, but ballooning her working jib to windward instead, ate still more to weather. Kathleen plunging in her wake, made it impossible to bear away if a blanket was to be avoided.

CRESCENT, THE AMERICAN CHALLENGER, WHICH NEARLY LIFTED THE CUP.

Despite the fact that Crescent's only canvas to windward was the inefficient working jib, she made almost as good time to the leeward mark as Whirl, turning it 20 seconds behind the leader and just 5 seconds ahead of Kathleen. As her working jib jibed over for the last time, an upper batten caught on the forestay and snarled the sail up, so that only the lower triangle of it drew when they hauled her on the wind. This wretched head canvas rapidly sagged her to leeward, and Kathleen passed her in the first 100 yards. They stayed her to shake it out, but the sail remained fouled, and they had to lower it, roll the turn out, and hoist it again. After that she chased Kathleen hard, but the latter finished the first beat back to the club house with a lead of 29 seconds.

Whirl, of course, as everybody expected, simply revelled in the heavy going, and had by this time a lead of two minutes. The second run down the wind was covered by Whirl and Crescent in exactly the same time, Crescent carrying a spinnaker, on the last desperate chance of winning the race or losing her mast. Kathleen made the best time by 28 seconds to the leeward mark, and, although still away astern of Whirl, led Crescent by almost a minute at the turn.

And now came the battle royal. Leaving Whirl to the hollow victory of first place—for by points from previous races the boats stood, Kathleen 5, Crescent 4, Whirl 3—the American challenger and the Kingston holder of the cup fought tooth and nail for second position, which meant the retention of the trophy for the Canadian, or the tying of the score and a fresh chance to win for the Yankee. Hurling snowstorms of foam half-way up the mainsail, lee decks buried, underbodies showing to windward down to the turn of the fin, masts and sails slanting away over like the wings of dipping gulls, the two went storming along up the broken stretch of whitecaps off the Simcoe Island shore. Kathleen, at her best in smooth water, longed to come about and stretch to the shelter of the northern mainland; but grim as Fate, on her lee quarter, pursued the black-hulled Crescent, and to come about meant to violate the ancient maxim of always keeping between your opponent and the weather mark.

But the best of rules can be followed out too far. Skipper Cunningham observing this one, overstood the mark until Crescent, although actually astern of him, was really nearer to it. Then the black pursuer hove in stays on the port tack and filled away with a tremendous full for the finish. Kathleen swept around a second later—but was it a second too late?

The flying Yankee that had been astern was now abeam, tearing home with started sheet. Now, Kathleen rolled down to the cockpit combings in a furious puff, griped hard to windward and Crescent shot six feet ahead. On they came with boiling wakes, staggering under the press of canvas like destroying angels burdened with the doom of the world. Kathleen had one hope left. To finish, the yachts had to pass to leeward of the buoy and then shoot across the line between it and the club. Kathleen was to windward, and if she could only establish an inch of an overlap she could bear away, force Crescent to make the wider turn outside of the mark, and then cut in across the line.

Crescent's skipper had a well-thought plan of leading Kathleen past the finish buoy on the starboard side until both had to square away and jibe to reach it. This would have put him to windward, given him the overlap and, consequently, the inside berth and the shorter turn; but the fact that the finish line was terminated at one end by the club house wharf made it impossible to carry out these tactics.

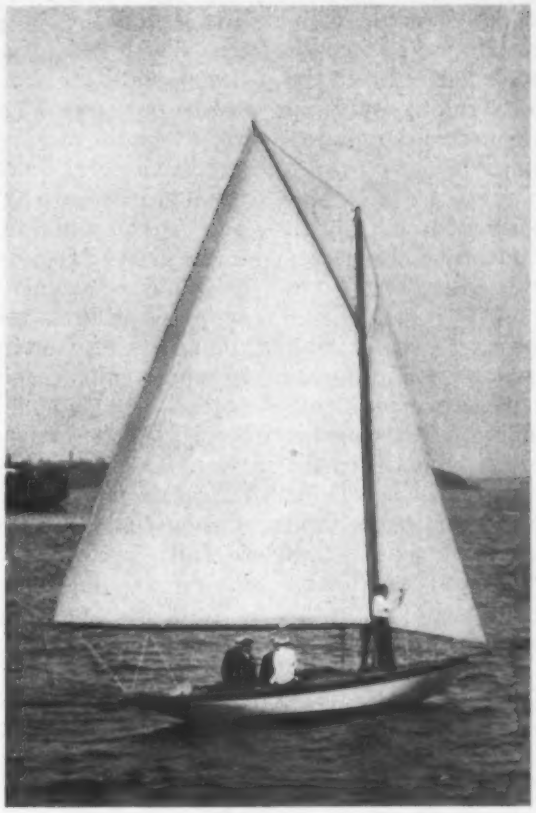
Crescent hung on till the last minute, and then bore away for the buoy, but Kathleen's skipper was wide awake and his craft instantly went boiling after her in a furious puff.

Five feet, four feet, three, two, one, Crescent's lead diminished.

"An overlap, by the Great Hook Block!" yelled excited watchers on the dock, as Kathleen's horn poked up on Crescent's weather quarter. The white-hulled, shark nosed in, forced Crescent to make a wide turn at the outside of the buoy and shot past to leeward of it, first.

Many of the spectators thought the race was won and cheered frantically for Kathleen; but she had yet to cross the line, and she swept around as though sailing on Mercator's projection, or the Great Circle, head reaching in the wind's eye, sails slatting and banging in a flurry of wind from the club building, seemingly careless whether she ever got across.

Every arm in the balconies waved frantic directions, thinking her skipper had made a mistake. The black-hulled Crescent, spinning like a top despite her wider turn, came shooting through Kathleen's lee.



KATHLEEN, WINNER OF THE SERIES WHICH KEPT THE GEORGE CUP IN CANADA.

Just then a puff caught Kathleen's jib, rolled her down till the water seethed along her lee shrouds, and she swung off on the starboard tack, while Crescent's black snout blotted out the finish buoy from view.

"Bang! Bang!" went the cannon.

"Kathleen, twelve-fifty-ten! Crescent, twelve-fifty-eleven!" called Captain Leslie, judge and time-keeper.

And so Kathleen, with seven points to her credit, through winning second place saved the cup. One of her crew fainted as she ranged up to the dock. The Watertowners, with victory so close to their fingertips, made never a word of complaint. They have a splendid reputation as good sportsmen, win or lose.

The actual margin by which Kathleen won was undoubtedly less than one second. Trained observers estimated the space her bowsprit end projected past Crescent's at various distances, from six inches to two feet. Taking the maximum at two feet per second, she would be traveling 120 feet a minute, which is barely a mile and a half an hour; and she was undoubtedly head reaching at two or three times that rate.

The races which led up to this cyclone climax were of the keenest description.

The first race, July 1, was over a seven and a half mile triangular course, twice around, starting from the Kingston Yacht Club, sailing out towards Lake Ontario, then across towards Simcoe Island, and back home. The races were held, it should be understood, at the point where Lake Ontario narrows down to the St. Lawrence River and the Thousand Islands begin. A line was stretched between a barrel buoy, south of the Kingston Yacht Club, and a dinghy anchored to the southeast. The order was: "All buoys to port." Whirl had the best of the start, leading Kathleen by ten seconds, and Crescent by fifteen, as they passed the dinghy. On the broad reach westward to the Rockwood Asylum buoy, Whirl drew away steadily, and when she had all but completed the first round of the triangle, she had a lead of nearly two minutes on Crescent and three minutes on Kathleen.

But here events took an odd turn. The five judges, with the best intentions in the world, had cancelled the dinghy as marking one end of the starting line. They did this in order to have the yachts finish between the club-house pier and the regular club-house buoy. But they had neglected to take the dinghy off the course, and Judge Reeves, of Crescent, was the only skipper who clearly understood that the buoy he was to turn, completing the first round, was the buoy off the club house. He had asked specifically about it just before the start. Whirl beat back away to windward of the club-house buoy and turned the dinghy—two hundred yards southeast of it—amid a volley of shouted instructions and ex-

WAITING FOR THE GUN.

BEFORE THE START. FIRST DAY'S RACE.

WHIRL IN THE FOREGROUND.

planations. Crescent, well to leeward of her, bored for the club-house buoy like a bullet from a rifle, and swept around 40 seconds before Whirl reached it. Kathleen, unable to decide between the courses of the two leaders, held on for the dinghy until nearly up with it, and then, comprehending the tumult on shore, bore away and passed the buoy 3 minutes 13 seconds astern of Crescent.

The northeast wind, which had never been of more than seven-mile strength, now began to peter out and become fluky. Eighteen minutes after starting on the second round the yachts were on perfectly even terms. Thirty minutes later, Whirl had a ten-minute lead.

It was a spinnaker run home this time, owing to a shift, and Æmilius Jarvis in the leader had the unenviable task of choosing between fighting all the way across against the American, leaving the race easily open to the other Canadian, or of seeing his fine lead go for nothing. Apparently he chose to avoid even the faintest suspicion of combination against the challenger, for Crescent passed Whirl to windward without any struggle, and Kathleen drew in on the Toronto boat's lee. It looked as though Whirl would win out at first. Then it looked as though she would have second place; but they blew across the line in the order, Crescent, Kathleen, Whirl, all within thirty seconds, and Whirl only four seconds behind Kathleen, thus getting but one point, after leading for most of the course.

After this race, the judges abolished the double-ended starting line, and followed the Kingston Yacht Club's regular practice of starting and finishing between the buoy and the club-house pier. The second day's race was also triangular, with the wind northwest and buoys to starboard. It was a reach across to Simcoe Island, and Kathleen, crossing on gunfire, led Crescent across the line by one second, and Whirl by 25. The unusual spectacle of a yacht with the most way on making the poorest start was here presented, Crescent coming down before the wind at such a rate that, although she crossed the line 24 seconds ahead of Whirl, as the latter spun around in a complete circle, she was in third position before the yachts passed the buoy at the outer end of the line.

Kathleen was just able to keep her lead over to the island, and once she had turned the buoy the others passed her, but she struck a fine slant of wind in under the shore and went racing past them to windward. Coming in stays, she stood away across to the north shore, or mainland, her skipper, Henry Cunningham, employing to the best advantage his fine knowledge of local conditions. Crescent stayed with Whirl in a close battle, standing to the westward, and Kathleen got the first of a good slant off the mainland and stood up and turned the asylum buoy with a lead of fully three minutes, which she held practically to the end of the race.

Kathleen's unexpected victory gave a new turn to affairs and aroused interest to fever pitch. She was looked upon as certainly slower than Whirl, and possibly unable to beat Crescent in rough water. But her standing by points was now 5 to Crescent's 4 and Whirl's 3, and all she had to do was to win second place to get 7 points, a majority which would save the cup. How she did it has already been told.

The Problem of Ocean Power-Boat Racing

EDITOR'S NOTE.—This article presents the views of a man who has reason to regard himself as one of the leading authorities on motor boating in this country. It was written at the request of the editors of YACHTING, and is presented not at all as the viewpoint of this magazine, but as the personal opinions of a man whose ideas, whether justly or unjustly formed, merit serious consideration.

AS aftermath to the power-boat race to Bermuda last June, we have chiefly to consider the question of utility. Other questions enter, to be sure, but they are of minor consideration. Primarily, the points which naturally arise have to do with the benefit, or otherwise, to the sport of motor boating in general.

What lessons have the three motor-boat races to Bermuda taught? Have they exerted influence upon design and construction—in other words, has a staunch, all-around boat, involving advancement in the science of motor-boat design and construction, resulted from these races? Have they taught us something we did not know before? Have the races been the result of a desire for self-advertising, or have they been conducted purely in the interests of sport? These are the things we want to know and have a legitimate right to ask.

Before proceeding further, let us dwell briefly upon the last Bermuda race. Four boats participated, which number, as against the entry list of two in each of the preceding races, argues a growth in popularity; not a great growth, it is true, but, still, satisfactory, all other things being equal. Troubles with motors were not infrequent; seas broke over the boats at times, rendering them wet and uncomfortable, and great care lest the racers be pooped was at times necessary.

One of the boats, Nereides, should not have been permitted to enter the contest. Launched but a week before the start, which precluded a thorough trying out, with fuel accommodations for a long race so inadequate that two tanks containing 400 gallons of gasolene had to be lashed on deck, she was a promising candidate for admission to that great and dolorous company of vessels which have "never come home." On the Ilys there was a story of broken-down engines, man washed overboard and helmsman lashed to the wheel—altogether an experience which only a flood-like flow of weather and dirt-proof optimism could have construed into a pleasurable outing on the deep.

Sleep on all the racers was a mighty rare luxury, according to reports, and there seems little doubt that a real Gulf gale—such as motor boats racing to Bermuda have been sufficiently fortunate to escape in the past three years—would have sent two or more of the boats to the bottom.

Is it not significant that all boats which have raced to Bermuda have been inferior to Ailsa Craig, one of the first boats built for deep-sea racing? The Craig was designed by Cary Smith essentially for this Bermuda race. Aside from ocean racing, she is now doing about the only other thing she could do in the best way—serving as a tender for the sixty-four foot sloop Winsome; in this capacity her capabilities as a towboat make her worth while.

Here is the point: For a boat suitable for racing to Bermuda, Ailsa Craig's owner sacrificed the interests of every-day cruising. His order for the Craig meant that in the interests of successful sport, lasting about a week, *i. e.*, racing to and from Bermuda, he was willing to build a boat which, at all other times of the year, would fail of yielding the most satisfactory results. Just how this works out is evidenced by the fact that when Mr. Craig tired of racing to Bermuda he sold his craft. As she stands she represents the best type of ocean racer. In making this statement, I have in mind the boats produced this year.

Now, where you note an absence of progress you invariably note an absence of other things, if you look far enough. Ocean racing of boats of the type which have thus far figured in races to Bermuda—always excepting Ailsa Craig—is folly, pure and simple. And some day, if these races in such boats are persisted in, the folly will be brought home in no uncertain manner.

But assuming no grave accident, what did this year's race teach? Nothing, assuredly, that we did not know before. Chiefly it has taught that small boats can go on the ocean. The first shipwreck wherein passengers were obliged to leave a great ves-

sel and take to rowboats proved that. Aside from this nothing even interesting was told. We knew before that men can survive without sleep for a certain period; we know they can breathe noisome fumes and live, and we know that some men can be happy although surrounded by oil and dirt, clad in soggy clothes and living upon raw or half-cooked food.

There will, in my opinion, be no future of racing to Bermuda or any other deep-sea point, because the elements that make for popularity do not exist therein. The boat, as said before, which is eminently suitable for racing of this sort is not suitable for every-day cruising. The simon-pure ocean racer can never be satisfactory in any other capacity. In her so many things must be applied in the interests of safety, fuel supply and hard ocean service as to interfere with those accommodations and arrangements which make the sane cruising boat suitable for harbor and coastwise work so satisfactory. Boats of this comfortable type are increasing year by year, and each succeeding year sees improvement in speed, accommodations and wholesomeness. It is along these lines that the sport of motor boating is growing. The racing boat of the Dixie II type is of no more practical utility in the way of every-day work than the Ailsa Craig—not so much, in fact—but the point is that whereas a boat like the Craig affords satisfaction one week in the year, a racing boat of the Dixie type may race almost constantly throughout the season. Even at that the high-speed boat has in this country given way to the every-day cruiser.

You could design two boats of the same dimensions, one for Bermuda racing and one for every-day cruising, and they would be totally unlike. One would be a source of constant pleasure for her owner, able to go anywhere along the coast at a good rate of speed, full of comfortable accommodations; the other a stuffy, low-powered boat, unsatisfactory alike for speeding and cruising.

I would not have my words construed into an attack upon the boats that raced to Bermuda this year. For the work for which they were intended, that is to say, every-day cruising, they are all right; Heather especially has a good, all-around model for this sort of work. But she is not a distinct ocean-going proposition. Neither were the others. In the case of the two boats built at Greenport, it was not until the last moment that their owners decided to enter them in the race to Bermuda. Now, how one can argue that such hit-or-miss methods make for the best interests of the sport of long-distance racing is not easily understood.

That the race has attracted attention is because of the fact that it is a foolhardy thing, and that is a sort of interest that argues no firm basis for future progress. To make it a meritorious function, a function to enlist the respect if not the enthusiasm of the great mass of motor-boat men, rules should be rigid and uncompromising. Boats should not be less than sixty feet waterline and thoroughly wholesome and substantial. They should have an immense gasolene capacity, at least one-third more than necessary to carry boats to destination on a straight run. I don't mean by this tanks strapped on deck—I mean downright capacity. Boats should be equipped with a sail plan large enough for service, and to maintain steerageway under all ordinary conditions.

With these stipulations, long-distance ocean racing would have a sound foundation, and its growth would depend alone upon whether men of means sufficient to build craft for such a race would find the game worth the candle.

Forecast of the Mackinac Race and the Western Situation

By J. M. HANDLEY

WHEN this issue of YACHTING goes to its readers, the great Mackinac race of the Chicago Yacht Club, the most important sailing event of the entire season on the Great Lakes, will have been finished and a winner decided. The race this year took on added interest through the entry of the big schooner Amorita, bought in the East by Dr. W. L. Baum, former commodore of the Chicago Yacht Club. Amorita's fine showing in the Bermuda race made the big two-sticker a strong favorite for the event, though there were not a few who pinned their faith on William Hale Thompson's Valmore, last year's winner. In a review of the month's yachting, in a recent issue of this magazine, Mr. Thompson was unwittingly credited with fighting the anti-professional skipper rule, passed by the Chicago Yacht Club for this race. It was said that the owner of Valmore would suffer by the rule. As a matter of fact, Mr. Thompson, assisted by George Peare, sailed Valmore in her winning race to Mackinac last year, dividing the work at the wheel between them. Thompson and Peare are two of the ablest skippers on the Lake, and Mr. Thompson has always been a strong advocate of the amateur rule. The rule alluded to has since been rescinded by the club, and professional skippers are now permitted to handle the boats in this race. This was done in deference to Dr. Baum, whose Amorita is a pretty big handful for most amateur skippers.

This will probably be the last year for some time that the annual cruising race of the Chicago Yacht Club will have Mackinac Island for its terminal point. A committee has been appointed by the club to investigate the opportunities offered by other ports, and several good cruises have been laid out and will be studied closely by the committee, with a view to selecting a suitable point to which to race.

The Mackinac Cup will remain a fixture for the Mackinac race, as the deed of gift provides that it shall be raced for to this point, so that, at some future day, the race to the Straits will undoubtedly be resumed. The course to this point is what might be called a decidedly "sporty" one, as the last 120 miles are through intricate channels, which are strewn with reefs, rocks, islands and currents that make the sailing a difficult and trying test of seamanship. The trouble with Mackinac is that the people of the island have not realized the value of such a race and have not overexerted themselves to secure the perpetration of the event. Then, Mackinac is lacking in harbor accommodations for a large fleet, and the anchorage is far from safe in heavy weather, as it is an open roadway, unprotected by breakwater, and sheltered only from certain winds.

The big local event of the month of August is the series of races for the Sir Thomas Lipton Cup of the Columbia Yacht Club. The fact that no new boats have been built for this event this year is undoubtedly due to the unfortunate happenings of the last season's race, which resulted in so much bad feeling. The disqualification of a prominent boat from down the Lakes, while probably correct from a strictly technical ground, was unfortunate, and has had the effect of keeping away outside competitors, so that the local boats will have it out between themselves this season, according to present indications. The down-lake sailors feel that they have been treated unfairly in the past,

(Continued on page 168).

The Race Around Long Island

EVERYTHING IN READINESS FOR THE START OF THE 210 MILE OCEAN RACE—A FINE LIST OF ENTRIES RECEIVED—THE BOATS THAT WILL START AND THEIR TIME ALLOWANCES

WELL, all the preliminary work is done, the entries will all be in by the time this issue is in the hands of our readers, and it is up to those who have entered their boats to do the rest, and make the race around Long Island the most successful ocean race of the season. That it will be a hard-fought struggle from the moment the gun is fired off the Atlantic Yacht Club until the committee boat off New Rochelle heaves in sight, one needs only to look at the list of entries to know.

In an ocean contest of this length, varying weather conditions and the time allowances play such an important part that it may be anybody's race. There is hardly a boat entered that has not a "look in" for a prize, if we can judge from Block Island and other long-distance events.

At this writing, eighteen boats have entered, and there is still another week in which to round up a few more. The following is the list as it now stands, with the time allowances of the boats according to the measurements turned in, a number of which were not accompanied by certificates, and will have to be verified at Gravesend Bay before the start:

FIRST PRIZE FOR THE RACE AROUND LONG ISLAND.

Name.	Owner.	Rig.	Club.	Length overall.	Allowance.
Ramallah	E. H. Tucker	Sloop	New Rochelle	44 6½	.....
Redwing	M. B. Pendas	Sloop	N. Y. Athletic	43 ..	.37½
Crescent	A. G. Hill	Sloop	Staten Island	41 8	1.15
Fearless	B. R. Stoddard	Sloop	New Rochelle	41 4	1.15
More Joy	W. H. Childs	Sloop	Bensonhurst	41	1.27.30
Intrepid	Geo. P. Granbery	Sloop	New Rochelle	40 5	1.40
Tillicum II	C. S. King	Sloop	New Rochelle	39 2	2.17.30
Victory	H. A. Jackson, Jr.	Sloop	N. Y. Athletic	38 11	2.17.30
Nutmeg	A. C. Jones	Sloop	Rhode Island	38	..2.42.30
Marie	Hollis Burgess	Sloop	Marblehead Cor.	37 10	2.42.30
Peri II	Jas. S. Bradley	Sloop	Brooklyn	37 6	2.55
Altair	H. L. Stone	Yawl	New Rochelle	33	5.2
Surprise	M. S. Kattenhorn	Yawl	New Rochelle	31	5.52
Snug	Daniel Bacon	Ketch (Aux.)	New Rochelle	30	6.38
Cutter	Lieut. DeKay	Ketch	N. Y. Nav. Res.	30	6.20
Gertrude	E. J. Cram	Cat	Jamaica Bay	24 7	8.20
Cricket	H. P. Wells	Sloop	Staten Island	24 6	8.20
Alarm	Walter Burgess	Sloop	Marblehead Cor.	24 1	8.32.30

The boats are required to report at the Atlantic Yacht Club at least twenty-four hours before the start. YACHTING will have a towboat at New Rochelle harbor at 2 p. m. of Thursday, July 29, to tow the entries from the Sound through Hell Gate to Gravesend Bay, and those boats from other points than New Rochelle should arrange to be in that harbor by Thursday.

To most of the crews the track from Sandy Hook to Montauk will be unfamiliar, but as it can be made on only two courses and there is plenty of sea room, there should be no trouble.

The course takes the boats down the Bay to the Southwest Spit buoys, which must be left to port. It is low water at the Hook at 12.08 p. m. on July 31, so there will be a fair tide down the Bay. The rest of the course is regardless of buoys.

There are one or two little fellows in the race, not over 25 feet long, and the boys sailing them are just as anxious to go over the long course as those on the larger boats. The size of the entry list speaks well for the popularity of long-distance racing. Up to the race for the Brooklyn Ocean Challenge Cup, which was started July 3, and had Vineyard Lightship instead of Montauk as the turning point, there has been no race around Long Island for many years.

There will be a representative of the Regatta Committee handling the race at the Atlantic Yacht Club all day Friday, July 30, to look after and inspect the boats that are entered. It is hoped that by Friday night all the crews will be gathered at the Atlantic Yacht Club for any final instructions that may be deemed necessary.

Arrangements have been made to have those who desire to witness the start accommodated on the boats to Sea Gate that leave the Battery Landing at 8.10 and 9.10 a. m., July 31. Both of these boats arrive at the Atlantic Yacht Club before the start of the race.

The following are the general conditions: Course—From Gravesend Bay to and around Southwest Spit, thence around Montauk Point, through Long Island Sound to Echo Bay, New Rochelle, 210 nautical miles.

Start—Between Atlantic Yacht Club committee boat and mark boat flying white ball and club flag anchored in Gravesend Bay. Time of start; 9.50 a. m. warning signal; 9.55 a. m., preparatory signal; 10 a. m., starting signal.

Finish—Boats in finishing shall pass south of committee boat, which will be anchored about 100 feet south of Hicks Ledge buoy, off Echo Bay, New Rochelle.

Time Allowance—Twenty-five minutes per over-all foot for the course. (Basis 7 seconds per foot per mile.) An extra allowance of 5 per cent. for yawls. Auxiliaries will also receive an allowance of 5 per cent.

Protests—Verbal notice of protest must be made to judges within 15 minutes of finishing, and be followed in one hour by a written statement of the facts on which it is based.

A trophy, consisting of a bronze shield suitably engraved, will be given to every boat not winning a prize that finishes the course.

When the front of the sprayhood is raised and side and rear curtains rolled up, Sandpiper has a rigidly-supported awning over the forward cockpit, giving a comfortable amount of headroom.

A Lazy Man's Boat

By E. T. KEYSER

Photographs by the Author

SANDPIPER was built with a view to producing a boat suitable for salt-water fishing trips, with plenty of cockpit space, and, at the same time, one able to navigate reasonably rough water, and offering sleeping facilities when required. To this end she was given a straight bow and a compromise stern, while the dimensions decided on were 26 feet 6 inches length over all by 6 feet 4 inches greatest beam, with a draught of 26 inches at the skeg.

The decks are very short, being but 4½ feet each. Her cockpit, 18 feet in length, is divided by a bulkhead into forward and after compartments; the former 10 feet and the latter 8 feet in length. The side-locker seats are 10 feet long and 15½ inches wide, while the lazy-back seat across the after end of the after cockpit is 3 feet 10 inches long by 15½ inches wide, the after cockpit floor being 7 feet long by 6 feet wide. For power she was given an 8-9 horsepower, 2-cylinder, 2-cycle Monarch engine, which is placed forward of the amidship bulkhead, with 6 feet 4 inches of floor space between the flywheel and the forward bulkhead, so that an air bed may be laid upon the floor, affording comfortable sleeping quarters for the skipper.

A rear drop curtain, long enough to come 5 inches below the top of the midship bulkhead, transforms the sprayhood into a commodious summer cabin.

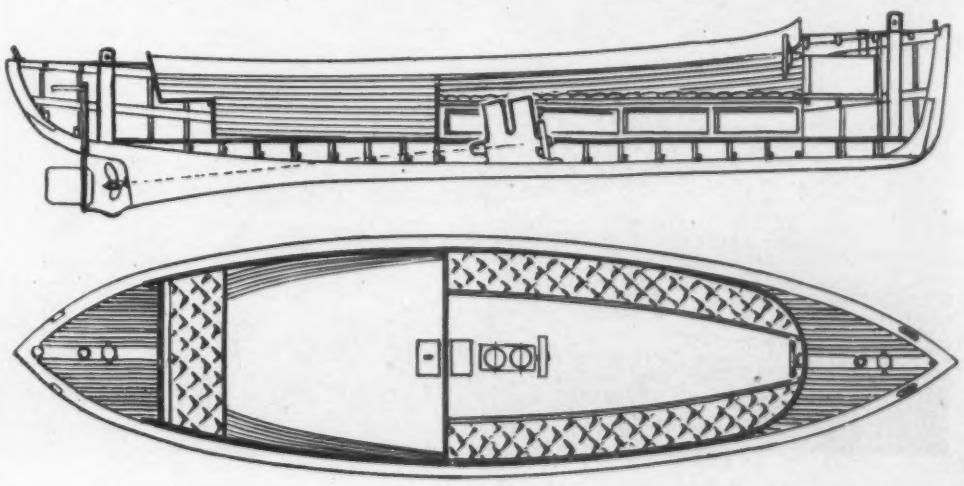
The jump spark system of ignition is used, and the two coils, with waterproof covers over the vibrators, are seated in a box fastened to the forward side of the midship bulkhead, directly aft of the engine. A three-point switch is mounted on the box casing, into which the coil slips. The 12-cell wireless battery box is carried underneath the after end of the port locker seat, with wires brought up along the after bulkhead as far as the coils, to which one is attached and the other brought forward to the ground of the engine. By this arrangement of the coils all wiring is brought forward in a straight line, and there are no cross-wires to encumber the cockpit. This, together with the absence of encumbering exhaust pipings and mufflers in the cockpit (the latter being under the after deck and the former running beneath the flooring), gives the boat an extremely clean and unlittered appearance.

Instead of cleats, there are samson posts forward and aft, which run down and fasten securely to the keel, so that, once anchored or moored, it is the cable and not the deck fitting which will have to go before the boat could break loose.

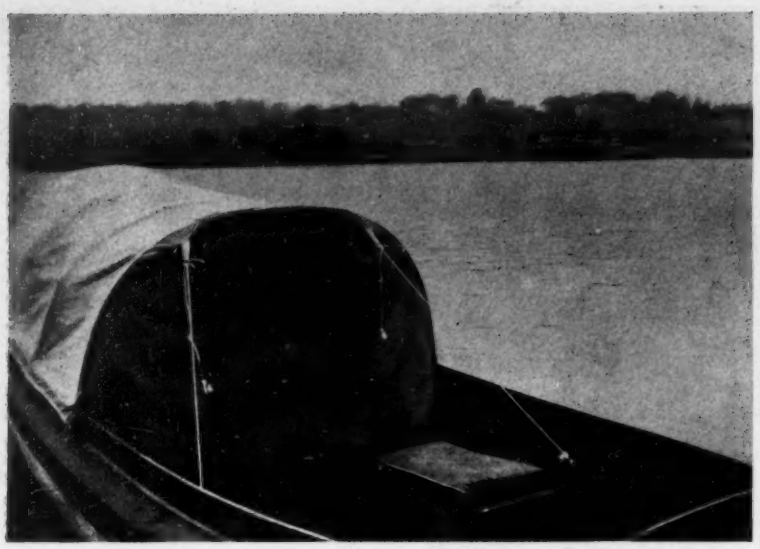
There is an auto-pattern steering wheel forward, which allows of the helmsman standing erect or sitting on the locker seat, with the wheel always at the proper height. In order that Sandpiper may be handled easily by one man, an upright wooden steering lever is fastened by a removable pin to a couple of T-shaped brass plates on the after cockpit floor just aft of the midship bulkhead. This passes through a loop on a secondary tiller line fastened to the main line, and is so placed that it may be easily handled from the engineer's seat, which is at the after end of the port locker seat. The reverse gear comes up through the after cockpit floor, within reach of the engineer.

As a precaution, in event of anything going wrong with the steering gear, the rudder post is brought up through the after deck and covered with a 2-inch deck plate. The upper part of the rudder post is squared to fit a tiller of galvanized iron piping. As a matter of fact, this is really the easiest and pleasantest way of steering the boat from the after seat.

There are two small boxes over the reverse gear, which prevent all danger of oil or water



Plans of Sandpiper, showing cockpit arrangement.



The mess chest, with a cushion thrown on top of it, makes a comfortable seat in the after cockpit and occupies but a small amount of space.

With the legs unfolded and the top open, the mess chest becomes a table, at which four people may be seated comfortably.

being thrown around the boat and, at the same time, the gear is readily accessible for lubricating or adjusting. The engine is set in the boat with the shaft at an angle that allows the three-bladed propeller to apply most of its power in the right direction. A gasolene tank of 22 gallons capacity is under the forward deck, with the deck plate just aft of the samson post, so as to allow plenty of room for the spray hood when it is carried on deck.

As Sandpiper will be used ten times for day runs on fishing trips to every one that she will be out over night, a sprayhood was decided upon instead of a cabin. This hood is 10 feet long and extends from the forward end of the cockpit coaming to just aft of the midship bulkhead. It is of 10-ounce waterproof khaki, has six bows and gives five feet of head room in center above the cockpit floor. At its after end is a drop curtain, divided in the center, the two halves fastening together with glove-snap fasteners, and low enough to drop five inches below the top of the midship bulkhead. When the sprayhood is up, the rear curtains buttoned together and celluloid window panes in the peep holes, Sandpiper has a commodious summer cabin, ten feet in length and the full width of the boat, with almost full head room in the center.

On sunny days, when the front end of the sprayhood is raised, the side and rear curtains rolled up and fastened, the whole forward cockpit is shaded by an awning. There are few meaner tasks than fastening down a heavy canvas boat cover, and yet such a cover over the cockpit of an open boat is a necessity if it is desired to keep engine and equipment in good condition. One cannot expect much more than two seasons' wear out of the cover of a sprayhood, so it was decided that Sandpiper's sprayhood might just as well earn its living by continuous service as a boat cover.

For the protection of the after cockpit, a row of brass hooks was screwed around the lower edge of the coaming and across the back of the after seat. Over these hooks are snapped the grommets of a 10-ounce khaki apron, the forward end of which is hooked on to a ring at the top of the after end of the sprayhood and held in place on the forward side decks by means of ropes. With the sprayhood up and the after apron in place, the entire cockpit is covered, and it is the work of but a few minutes, and very easy work at that, to get the after apron up and have the boat ready for starting the engine.

With a rope snapped on a ring on the after end of the lazy-back on the port side, brought up to the ring in the middle of the top of the after end of the sprayhood, and then fastened to a ring on the starboard side of the lazy-back, the apron is supported on two ridge ropes, which enable it to shed water as fast as the water sees fit to come down. What the skipper of the Sandpiper had not calculated upon, but which came subsequently as a pleasant surprise, was the fact that the apron, when set up, makes an after stateroom of the after cockpit sufficiently large to sleep two or three people, in addition to those carried in the forward cockpit. In fair weather, the sides of the apron may be thrown back for several feet, giving plenty of air.

Sandpiper was not intended for beauty nor for speed, and her interior trim is all of plain oak, finished bright. Her cushions are of brown, waterproof canvas stuffed with cork, and she has just as little work about her requiring polishing as possible. She is large enough to afford plenty of cockpit room, and the absence of exhaust pipes crossing the cockpit allows a good passageway on each side of the engine, every part of which is accessible. She is, if anything, rather tubby above water, but her under water lines are much better than one would imagine from the amount of hull she shows, and she has a particularly good stern.

With sprayhood set and apron in place, Sandpiper's interior is well protected against the elements. At night, when covered as shown, there is room for two people to sleep in the after cockpit.

She makes, with her moderate-sized engine, a speed of nine miles per hour, and her cockpit space was so laid out that, should her owner ever desire to dispose of her, a purchaser who wanted to transform her into a hunting cabin cruiser could very easily put a trunk over the forward cockpit, cut away a few feet of the after-section, and have a ten-foot cabin that would comfortably sleep three.

She has ample locker

(Continued on p. 168.)

OFF FOR BLOCK ISLAND ON THE SIXTH ANNUAL RACE.

The New York Athletic Club's Block Island Race

Photographs by E. Levick and L. DeB. Handley

THE sixth annual cruising race of the New York Athletic Club to Block Island was held this year on June 19, and will go down in history as one of the most remarkable small-boat events ever witnessed. Several new records were established, and they bid fair to take a lot of breaking. Forty boats crossed the starting line, which is eight in excess of last year's fleet in the same event and is the greatest number ever started in one and the same class; then the first to finish, the sloop Dutchess broke the course record by 4 hours 4 minutes 30 seconds; and, finally, the average made by her, slightly more than seven knots an hour over the entire distance, establishes new figures for craft of this size in a cruising race.

To say that the event was a brilliant success would be to voice what every yachtsman knows; but one feels it essential to once again offer congratulations to the man who, almost single-handed, has been able to develop an insignificant club cruise into the classic small-boat event of the Long Island Sound yachting season.

The achievement is the more remarkable in that the New York Athletic Club has neither the facilities nor the prestige in yachting circles to compete against organizations devoted exclusively to the sport. One would imagine, in consequence, a marked difficulty in obtaining entries. Instead, this race gets about five times as many as any yacht club holding like events, and the club can thank Commodore Jackson for it. To his devotion to the cause, his energetic personal endeavor, his attention to detail and his unfailing courtesy in meeting inquiries, can be traced the wonderful increase in popularity of this race.

There really would have been a far greater fleet this year had not the date conflicted with the Larchmont Yacht Club's spring regatta, which many would not miss. Seventeen of the fifty-seven entrants only drooped out at the last moment when they found that the start would be made at 11 a. m., preventing their taking part in both events, as they did a year ago, when the fleet was sent off at 6 p. m.

Only thirty of the forty starters reached Block Island, and this fact must be attributed to a lively little wind playing havoc with some of the boats in the late afternoon. And it will do no harm, while on the subject, to point out that, although courage and nerve are most commendable qualities, one should not mistake recklessness for them. Recklessness aboard a boat is the very negation of good seamanship, and it comes under the heading of recklessness to go even on such a race as this without being fully equipped for storms, fogs and emergencies.

NUTMEG, THE WINNER.

The above remarks are made with good reason, as the following case in point will show: We had just lost the Gut light over our stern when someone hailed us from the darkness, and when the look-out answered, an inquiry came as to our destination.

"Block Island," said our spokesman.

"How do you get there?" came back to us.

"East half South!" shouted our helmsman.

And then from our neighbor the startling information, "That doesn't help us much, we have no compass. I guess we'll have to follow you as long as we can and then steer after you by the stars."

Beautiful confidence, but rather risky, though our friends will probably not appreciate it, owing to their having reached West Harbor safely. But one hates to think of what might have happened had fog set in and the little craft missed the lights and gone ashore on one of the many rocky spots that are found in those waters. And there were others in the fleet who took pride in asserting that they had started minus compass, lights, fog horn and other paraphernalia prescribed by the racing rules. Apart from the foolhardiness of such procedure, it should be remembered that the lack of these

required articles carried the penalty of disqualification with it.

Sunshine and a spanking breeze from West-by-North were the conditions that greeted the mosquito fleet as it headed from all quarters toward Whortleberry Island. Boats of every type, size and description assembled around Commander Fry's motor launch, upon which the New York Athletic Club's yachting committee—Messrs. H. H. Jackson, A. B. Fry and C. S. King—were attending to the final details. The over-all measurement, upon which time allowances were figured, gave old types a chance against the most modern racing creations, and this brought out many a staunch, old windjammer that had long forgotten its competitive days.

At the warning gun there was a gradual converging toward the line, and so close were the boats as they jockeyed for a start after the preparatory that only the cleverest handling, and in many cases a courteous overlooking of the right of way, prevented accidents. As it was, the tiny sloop Scup was forced against the committee boat, and came very near being wrecked.

As the starting signal boomed forth, the fleet went over in a solid mass. With his usual skill, R. L. Cuthbert put the Busy Bee over in the lead, closely followed by Daniel Bacon's yawl Snug and Robert Brown's Q-boat Vingt-Trois. Then came Commander Stoddard's Fearless, Dr. J. B. Palmer's Dutchess, W. R. Berth's Kenosha I, and the rest of the fleet in a long string.

From the very first it was interesting to note the difference of opinion among skippers as to the best course to take. The majority, skeptical of the constancy of a westerly breeze, swung off immediately toward the Long Island shore, in anticipation of the usual afternoon southerly, but the believers in the present headed up to the Connecticut side, to take advantage of the smart wind while it lasted, and only a few compromised by keeping the middle of the Sound, evidently reasoning that they would get it whether it came from one quarter or the other, and that meanwhile they would hold the fat of the favoring tide. Thanks to the variety of ideas the fleet soon opened out, fan-shape, and before long the boats were scattered over the Sound, most of them with spinnakers set, a small number hurrying toward Matinicock Point under balloon jibs.

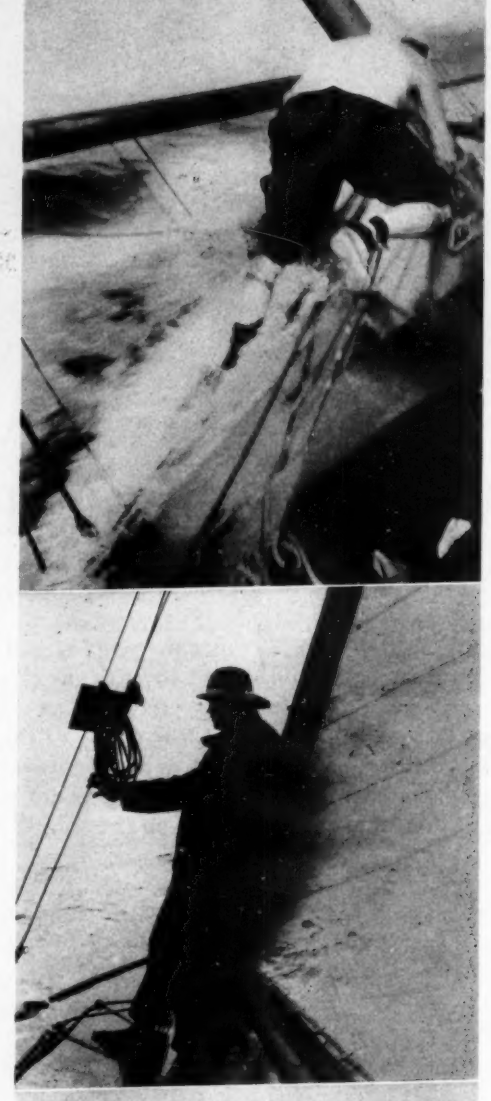
For about five hours it was fluky racing. The wind blew in shifting streaks, and although the larger craft gradually drew away, there was a constant see-sawing back and forth as first one and then the other received a puff and shot ahead or fell into a calm spot and dropped back. Nothing startling occurred until late afternoon.

Around four o'clock, when the leading boats had Stratford Light abeam and the Sound was beginning to take on the oily look of windless weather, there suddenly appeared on the water under the Long Island shore, a queer, dark shadow, that rapidly glided out toward the fleet. A minute later the peaceful scene was transformed into one of wild action and confusion, for the black streak was a well-developed, little wind squall from the southwest, and it hit the boats with the force of a sledge hammer. The wise ones jumped at their spinnakers and pulled them in as soon as the shadow became visible, and they were ready when it struck, but others waited too long, and had their hands very full when it came to dousing the great bellying sails. Some were torn and blown away. It was gratifying to note the general display of seamanship in this emergency. Light sails were handled with skill that would have honored a professional, and in a few minutes everyone was boiling along on his course at a terrific pace.

Thereafter the wind blew hard, but by no means steadily. It would sweep down the bluffs in vicious gusts and strike so hard that rails were buried deep. Many of the racers had about all they wanted for the next few hours, and the unfortunates who boasted balanced rudders had troubles of their own. Indeed, had the fleet not been reaching with lifted sheets, full sail could not have been carried. A few sensible skippers deemed it advisable to reef and stopped long enough to do so, gaining in speed and comfort, but the majority believed the squall would blow itself out in a short while and decided to lug full sail as best they could until it moderated. During this time some of the craft became almost unmanageable. Crescent, in particular, had a hard time of it. Short handed as she was, it was all her crew could do to keep her going. They had to let her round up when the puffs struck and then square off before it to compensate. Nor were others much better off.

It was a stirring, beautiful race. From Stratford Shoals to Horton's Point the wind kept on increasing, and the boats ploughed through the rough water like mad, living things. Then night fell, but the frenzied contest went on unchecked in the darkness, the decks running with water, the sails tearing at the rigging, every spar and rope strained to the breaking point.

History wrote itself fast while the fleet covered the distance between Port Jefferson and Plum Gut, and hardly a boat but reported some mishap, slight or otherwise. The log of J. E. Ridder's little sloop Bole, one of the babies of the fleet, reads like a thrilling tale of adventure. She is but 28 feet over all, frail, getting on in years, and is hardly a craft to brave heavy weather; yet in spite of repeated accidents her plucky crew drove her through it and put her over the finishing line, crippled and badly



ON THE JIB DOWNHAUL.
LOOKING FOR BLOCK ISLAND.
AN IMPROVISED CHART TABLE.

BUNCHED AT THE START.

IO, WINNER OF FOURTH PRIZE.

BOLE HAD A STRENUOUS TRIP.

defeated, but safe. It is worthy of mention that her navigator, George Merriam, is a son of the late Commander Merriam, of the battleship Missouri, and he was ably assisted by Egbert Peters and the two Beaver boys, Richard and William.

The Bole is not a rough-water boat; she is flat forward and pounds badly, so that the pump had to be manned at an early stage. In the worst of the blow she jumped her gaff in such a manner that it was impossible to lower the sail. Merriam had to climb the whipping mast to force the jaw back, and it speaks volumes for his grit and ability that he was able to do it successfully. He had hardly returned to the deck when there was a crash of splintering wood in the cockpit, and the two Beavers, who had been steering, fell back with the broken end of the tiller. By lashing the two pieces together, and by careful work, they managed to keep them from parting until Horton's Point was reached. Here a wicked puff rounded the little sloop up, and in the effort to keep her off the stick broke in another place. By the time it went, the boat had raced up to within easy distance of the beach, and now a sickening thud told the boys they were aground. It was pitch dark, the water was rough, and the situation was an ugly one. But some crews are never beaten. Merriam and Dick Beavers shed their clothes in a jiffy and jumped overboard, while the others helped with the spinnaker pole and lashed the tiller, and the craft was finally floated.

The wind held well all night, and in spite of a strong head tide the leaders worked through Plum Gut with ease. Outside a heavy sea was running, but the fleet could head for West Harbor with balloon jibs kiting, and it gave little trouble. It was a glorious run, and the fastest ever made in any Block Island race.

At 1h. 29m. 30s., Dr. Palmer's sloop Dutchess romped by the committee boat, first to cross the line and winner of the trophy for best elapsed time. Exactly five minutes later Mr. Jones' rakish-looking sloop Nutmeg shoved her square nose over, and when allowances had been deducted she was found to have won first prize on corrected time. The other awards were as follows: Second, E. Dominick's yawl Coot; third, Robert Brown's Q-boat Vingt-Trois; fourth, C. Marsland's sloop Io; fifth, Daniel Bacon's yawl Snug; special prize for Handicap Class members, C. S. King's sloop Tillicum II.

A pleasant innovation, when the fleet had collected in West Harbor, was the serving of a shore dinner near the landing pier, and the crews attended it almost to a man. It was followed by one of Commodore Jackson's inimitable "talks," and then prizes were distributed to the winners.

The following figures will give full particulars of the race:

Boat.	Length.	Allowance.	Owner.	Finish.	Corrected Time.	Position.
Notos	46.6	0.0	G. K. Benson	1.43.20	1.43.20	21
Dutchess	46.6	0.0	Dr. J. B. Palmer	1.29.30	1.29.30	10
Ramallah	44.6	.24	E. H. Tucker	Disabled		
Amorita	43.6	.36	F. B. Bragdon	2.52.00	2.16.00	25
Fearless	41.6	1.	B. R. Stoddard	2.49.10	1.49.10	22
Crescent	41.6	1.	A. G. Hill	2.34.15	1.34.15	18
Red Rover	41.6	1.	T. B. Bleecker	1.44.50	12.44.50	6
Saladin	41.	1.6	R. W. Rathborne	3.17.30	2.11.30	24
Sagola	41.	1.6	W. H. Lindeman	2.44.08	1.38.08	20
Intrepid	40.6	1.12	G. P. Granbery	2.24.20	1.12.20	13
Chaos	40.6	1.12	E. E. Higgins	3.45.40	2.33.40	26
Bobtail	40.6	1.12	R. Monks	2.04.40	12.52.40	10
Victory	39.	1.30	H. A. Jackson, Jr	4.11.35	2.41.35	27
Waialua	39.	1.30	J. Crowley	3.04.10	1.34.10	17
Tillicum II	39.	1.30	C. S. King	2.50.10	1.20.20	15
Bedouin	38.6	1.36	W. J. Fowler	2.21.00	12.45.00	7
Nutmeg	38.	1.42	A. C. Jones	1.34.30	11.52.30	1
Vingt-Trois	37.	1.54	R. A. Brown	2.21.28	12.21.28	3
Tomboy II	36.	2.06	D. Y. Pendas	2.55.00	12.49.00	8
Quest	35.	2.18	H. T. Vulte	3.29.10	1.11.10	12
Kenosha II	34.6	2.24	C. W. Voltz	4.34.00	2.10.00	23
Juanita	34.6	2.24	S. C. Hunter	Did not finish.		
Chinock	34.6	2.24	Morse & Lambden	Did not finish.		
Joker	33.6	2.36	R. N. Bavier	Time not taken.		
Kenosha I	33.	2.42	W. R. Berth	Disabled.		
Busy Bee	33.	2.42	R. L. Cuthbert	3.09.50	1.03.50	11
Maryola	33.	2.42	P. V. Giffen	Lost rudder.		
Scud	32.6	2.48	S. Cochrane	3.39.00	12.51.00	9
Psammiad	32.	2.54	Leonard Dyer	Did not finish.		
Altair	31.	3.06	H. L. Stone	4.21.15	1.15.15	14
Grace II	31.	3.06	J. F. Lambden	4.44.00	1.38.00	19
Io	29.	3.30	C. A. Marsland	4.05.10	12.35.10	4
Bole	28.	3.42	J. E. Ridder	Finished crippled. Time not taken.		
Snug	27.6	3.48	Daniel Bacon	4.24.55	12.36.55	5
Coot	27.	3.54	E. Dominick	4.05.05	12.17.05	2
Dignus	26.	4.06	Walter R. Enner	Did not finish.		
Laddie Boy	24.6	4.24	E. M. Cary	7.53.30	5.27.30	28
Imp	23.6	4.36	P. Cuddihy	Did not finish.		
Quest	23.	4.42	E. R. Cassidy	Did not finish.		
Scup	19.6	5.24	J. P. Gavitt, Jr.	Put into Stonington.		

GETTING STRAIGHTENED OUT FOR THE RUN.

AT ANCHOR IN WEST HARBOR.

The Month in Yachting

THE NEW HERRESHOFF ADVENTURESS AND ASPIRANT, WHICH HAS MADE HER REAPPEARANCE THIS YEAR.

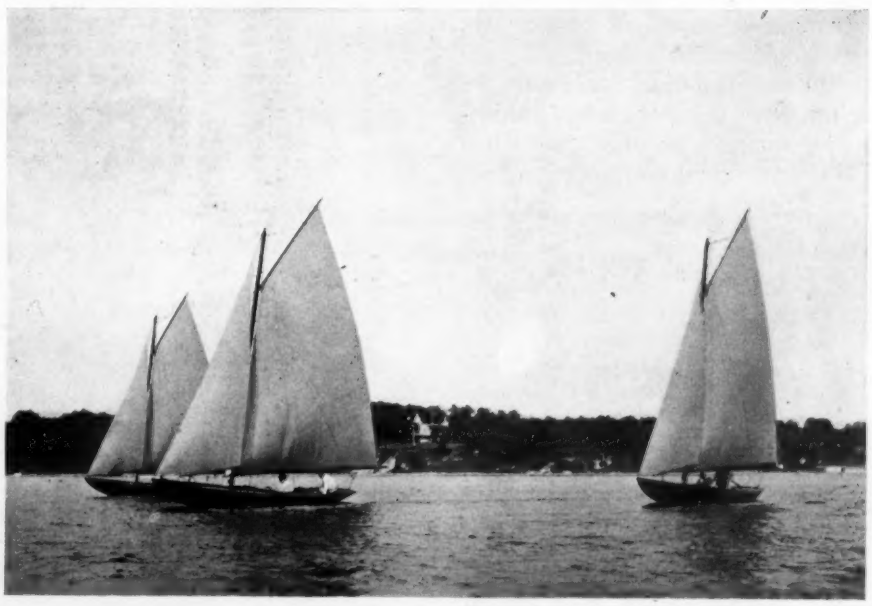
Photographs by F. A. Walter, E. Levick and W. B. Jackson

WITH the season of 1909 now fairly under way, we are in a position to determine just how far early prospects have been borne out by results. No one, probably, will attempt to gainsay that, in the East at least, the lethargy which characterized yachting affairs in the late spring, and which seemed to foreshadow one of the dullest seasons in recent years, has entirely disappeared; with conditions for the most part favorable, regattas thus far have been sailed and conducted with a snap and enthusiasm which bespeak brilliant things for the future.

Regatta committees are learning a lesson which makes for results. They have come to realize that large entry lists are to be secured only at the price of unceasing activity. Interest in a race has to be worked up among racing yachtsmen just as a man or combination of men would create interest in a business enterprise. If a large number of boats is desired for a certain event—and the larger the list of entries the more successful the regatta — the way to get them is by personal solicitation. And the most successful regatta committee is that which leaves no stone unturned to dig up every eligible racing craft afloat.

In former days, for example, New York Yacht Club regatta committees seemed to think that their duties included simply the arranging of schedules and the conduct of regattas. The success of the present committee — and its success will be very apparent as the season advances—lies in the fact that no club member who owns a racing craft escapes attention, and coming regattas of the New York organization will show the excellent results of this campaign.

Out in Chicago the first big race of the season, the race to Michigan City, has been sailed, and, barring light winds, was successful in every detail. Altogether there were thirty-five yachts entered, and although the number was smaller numerically than the list of entrants last year, it was not sufficiently so to indicate a falling off in interest in this fresh-water classic, especially in view of the backward season in the Middle West. Untoward conditions resulted in the scratching of nine boats, so that twenty-six crossed the line when the starting gun sounded. There was practically a calm, with a light breeze near the finish, which must have made the racing dull enough for the large number of spectators which followed the boats on the Kansas. Fred A. Price's swift sloop Spray duplicated her victory of last year, finishing five minutes ahead of E. M. Mill's thirty-five footer Illinois. Spray's victory was due to luck—or sagacity, as you please. The sloop followed a course well inshore, and when the land breeze sprang up she was the first to catch it and romped to the finish, between the Michigan city piers, a winner. William Hale Thompson's big schooner Valmore was third. Eleven motor boats



THE NEW JEWEL S., ONE-DESIGN BOATS OF THE GLEN COVE YACHT CLUB.

NAULAHKA, AMERICAN YACHT CLUB CHALLENGER FOR THE MANHASSET BAY CUP.

raced to Michigan City; and as the lack of wind played no part in their contest, they snorted and chugged and threw water over their bows in a way which afforded some compensation for the hundreds of ennuied spectators on the guest boat. Avis won in Class A; Swastika in Class B; Unadi in Class C, and Doze in Class D. Wawatasse had her claim to second place in Class A well established, when, within a mile of the finish, she ran out of gasolene. It is too bad to lose place through such a want of foresight or calculation on the part of an engineer. Skippers of gasolene craft should remember that there are times when the failure of supply might mean not only a lost race, but a lost boat.

While on the subject of Lake Michigan, it is a pleasure to announce that Cherry Circle, the famous little 21-foot sloop which won the Lipton Cup in 1906 and 1907, has been thoroughly renovated, with a view to increasing her speed, and will be entered in all the important regattas on the lake this year. The sloop has passed from the Chicago Athletic Association into the possession of Chicago Yacht Club members.

On the Atlantic seaboard there has been good racing, especially on Long Island Sound. In the season's first important regatta, that of the Manhasset Bay Yacht Club, there were more than forty entries, although bad weather kept the starters down to thirty-one. The feature of the race was the contest between six of the New York Yacht Club's one-design thirty-footers. The sextette all finished the fifteen-mile course within four minutes of one another, and Nepsi, the winner, defeated Phryne by just nine seconds.

The regatta of the New Rochelle Yacht Club was important, inasmuch as the three remodeled Class K boats, Istalena, Aurora and Winsome, made their first appearance of the season. Their topmasts have been lengthened, and about a foot more draft has been given to their keels. The result is that they now rate in Class J, about sixty-four feet. Istalena, sailed by George M. Pynchon, who won his first laurels in a smaller sloop on Lake Michigan, defeated the two rival single-stickers. Her victory was due to Mr. Pynchon's skill in windward work—skill, by the way, which subsequent regattas showed he has not lost. In this race, W. B. Duncan, Jr., at the stick of Aurora, did something he does not usually do—made a mistake. He crossed the wrong side of the starting line and was obliged to come about and cross again.

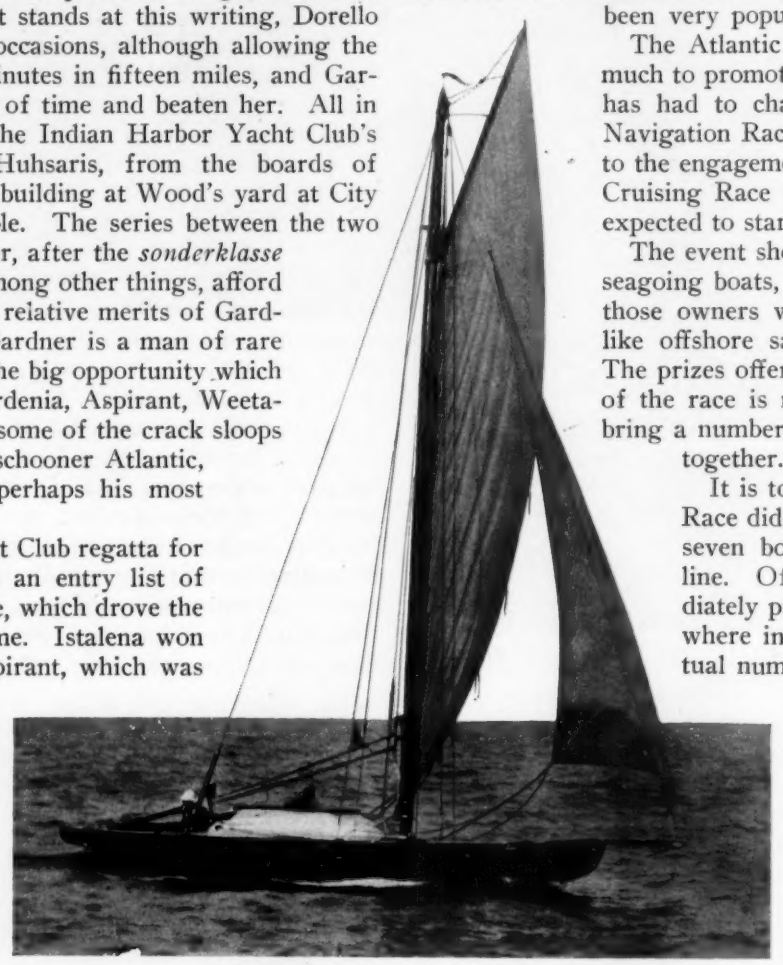
In the New York Athletic Club's race, from Whortleberry Island to Block Island, of which more extended mention is made elsewhere in this magazine, there were fifty-six entries and forty yachts of various sizes started. That fine racing organization, the Larchmont Yacht Club, had a snapping wind for its annual spring regatta, and of the fifty-eight yachts entered, fifty-five finished, two were disabled and one did not reach the finish line. This is the record entry list for the season, and Charles P. Tower and his efficient regatta committee conducted affairs without a slip. There is but one criticism to make of Larchmont regattas, and that is the crowding of boats at the finish, at the starting line and occasionally at the turns. The smaller boats sail courses similar in direction, but shorter, and there are times when the larger boats are seriously interfered with. L. J. Callanan's Eclipse, as a result of this crowding, collided with Pixy and nearly caused the little sloop to founder. There was a war of words over this accident, greatly to be deprecated, but everything is now adjusted, Mr. Callanan having expressed a sportsmanlike willingness to pay for repairs. Aurora defeated Istalena and Winsome; Eclipse, in the schooner class, beat Miladi; the Hanan brothers' Aspirant defeated Cord Meyer's Altair on corrected time, and Leo Herzig's Gardner-designed Class M sloop Gardenia had the supreme honor of beating the new Herreshoff creation, Adventuress, on corrected time. Adventuress, by the way, has not in her earlier races shown the capabilities of her larger sister, Avenger. Dorello, the Owens-designed thirty-eight rater, which cleaned up the Sound, to say

WIANNO, ONE OF THE NEW CLASS P BOATS OF MASSACUSETTS BAY.

nothing of Massachusetts Bay, last year, was beaten by the new thirty-one rater Naulahka, on corrected time, by more than ten minutes.

A great deal of interest in Sound racing has been aroused by the appearance of the two Herreshoff sloops. Naulahka was built for an American Yacht Club syndicate as challenger for the Manhasset Bay Cup, now held by the Indian Harbor Yacht Club. She lugs a whole lot of sail, and her hull presents many points of interest. The long bow, for instance, is hollowed out like a razor blade, bulging like a tadpole's belly on approaching the waterline, an effect to be observed in the Herreshoff Q-boat Eleanor, only more so. Naulahka, as a result of June racing, was tried out in all sorts of weather, and it cannot be said she proved herself a world beater, although, of course, Stuyvesant Wainwright, her managing owner, will probably have pulled her together before this appears in print. But, as it stands at this writing, Dorello has beaten her handily on two occasions, although allowing the smaller sloop more than nine minutes in fifteen miles, and Gardenia has also allowed her a lot of time and beaten her. All in all, the chances of success for the Indian Harbor Yacht Club's Manhasset Bay Cup defender Huhsaris, from the boards of William Gardner, which is now building at Wood's yard at City Island, are not at all unfavorable. The series between the two sloops will be sailed in September, after the *sonderklasse* races at Marblehead, and will, among other things, afford interesting suggestions as to the relative merits of Gardner and Herreshoff. William Gardner is a man of rare attainments, and has never had the big opportunity which will eventually come to him. Gardenia, Aspirant, Weetamoe, Iroquois, Irondequoit, are some of the crack sloops which he has evolved, and the schooner Atlantic, the transatlantic champion, is perhaps his most noteworthy creation.

In the annual New York Yacht Club regatta for the Glen Cove Cups there was an entry list of seventeen, and a spanking breeze, which drove the yachts over the course in jig time. Istalena won in Class K; Altair defeated Aspirant, which was overcanvased, and Eclipse defeated Miladi in the schooner class. Istalena, of the Class K trio, also won in the special regatta of the Seawanhaka Corinthian Yacht Club at Oyster Bay in the latter part of June, and Dorello turned the tables upon Naulahka by defeating her handily.



CHERRY CIRCLE, NOW OWNED IN THE CHICAGO YACHT CLUB, HAS BEEN THOROUGHLY RENOVATED THIS YEAR WITH A VIEW TO INCREASING HER SPEED.

In glancing over the list of yachts which Eastern Yacht Club members have in commission in and about Marblehead, one is impressed by the fine array of large craft. There are, for example, more than a dozen swift schooners, which have an average length of 65 feet waterline, to wit: Arbella, 100 feet; Bagheera, 51 feet; Constance, 86 feet; Emerald, 86 feet; Hope Leslis, 66 feet; Irolita, 66 feet; Loyal, 61 feet; Priscilla, 37 feet; Savarona, 80 feet; Taormina, 65 feet, and Venona, 45 feet. Then there are fifteen single-stickers, averaging more than 60 feet, as follows: Adventuress, 47 feet; America, 40 feet; Avenger, 52 feet; Dorello, 39 feet; Doris, 56 feet; Eelin, 59 feet; Glorianna, 45 feet; Humma, 45 feet; Indian, 31 feet; Irene, 30 feet; Orissa, 30 feet; Sakuntala, 34 feet; Siesta, 32 feet; Vigilant, 86 feet, and Tarolinta, 35 feet. A fine list and classy, too. Only the New York Yacht Club can beat it. In addition there are the new Class P boats built this year, Wianno and Timandra, which are furnishing excellent racing on Massachusetts Bay at present.

These two boats were built with an eye on the Lipton Cup for 31-footers (Class P), which was offered through the Corinthian Yacht Club. The cup is to become the property of the owner who wins three championships in the class in all open races on Massachusetts Bay. The races to count for these championships are those of the Eastern, Boston and Corinthian Yacht Clubs, and the Yacht Racing Association of Massachusetts Bay. The championship is to be figured on the percentage table of the Corinthian Yacht Club. In figuring the percentages, it will be assumed that a yacht will have started in at least half as many races as the yacht having the largest number of starts, which is a very good provision. Of course, the boats must be steered and handled by Corinthians.

The addition of these new boats has added to the interest of the class on Massachusetts Bay, where "P" boats have always been very popular in late years.

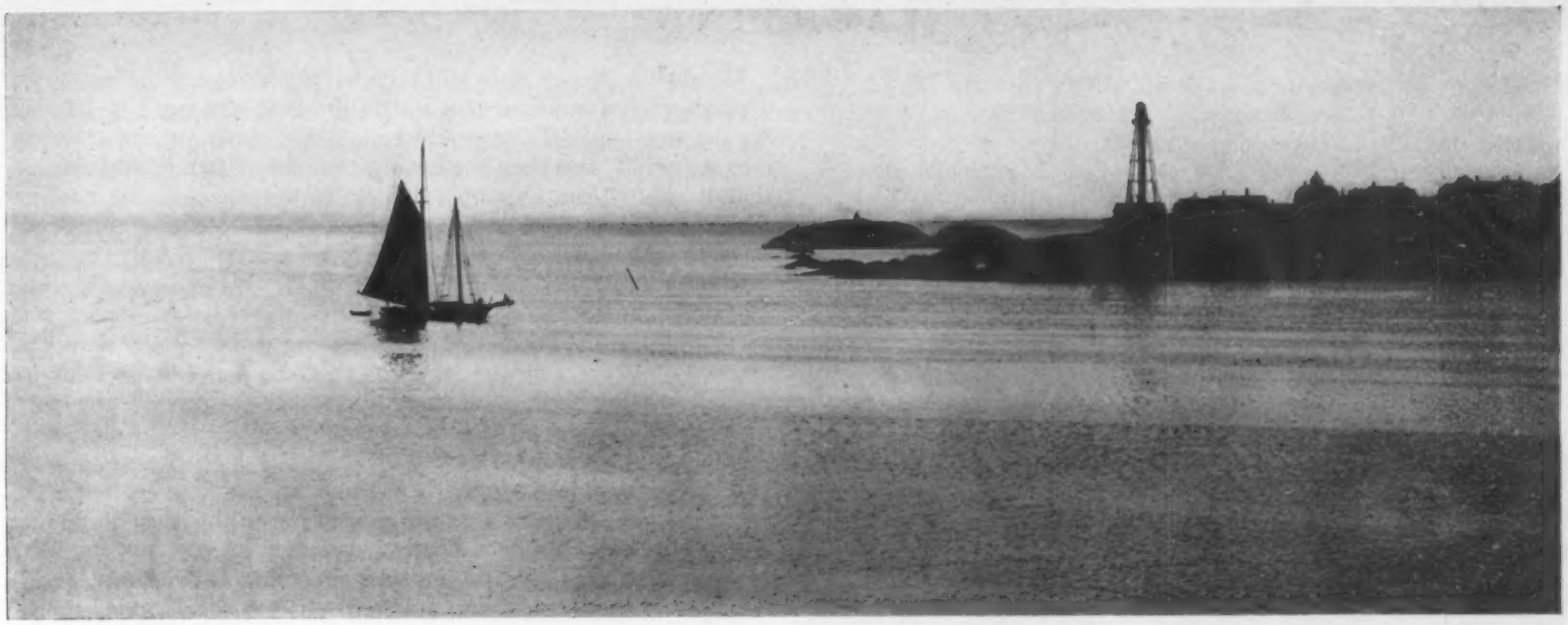
The Atlantic Yacht Club, which has done so much to promote long-distance and ocean racing, has had to change the date of its Corinthian Navigation Race from July 12 to July 31, owing to the engagement in the New York Yacht Club Cruising Race of a number of boats that were expected to start.

The event should attract a number of the best seagoing boats, and the conditions are such that those owners who handle their own boats and like offshore sailing should be eager to start. The prizes offered are handsome, and the object of the race is most commendable. It ought to bring a number of the old Bermuda contestants together.

It is to be regretted that the Cape May Race did not attract more entries than the seven boats that finally appeared at the line. Of these, one was disabled immediately preceding the start, as is told elsewhere in this magazine, reducing the actual number of starters to six. It is difficult to account for this apparent falling off in the interest, as there were nineteen starters in the same race last year. The fact that the weather encountered during the 1908 race was rather boisterous, and that there were a number of minor accidents, may have had something to do with the slimness of the entry list, but it does not seem that this in itself ought to be enough to deter owners from entering. Conflicting events probably had more to do with it.

It is to be regretted that after the efforts made by the regatta committee of the New York Yacht Club the racing members of the club did not support them better on the recent cruising races to Newport and return, and around Block Island. But sixteen boats appeared at the start for the race down, and but five entered in the race back, while ten went around Block Island.

This is a disappointing showing for a club the size of the New York Yacht Club. The race was something of an innovation, and should have proved extremely popular. Dorwina and Irondequit, although the smallest, stayed through the whole series, and had some very keen racing. Of the other sloops, Aurora had rather the best of it. Queen made her reappearance and showed that she had lost none of her old speed, and the racing between her and Corona was of the best, with the newer boat on top.



MARBLEHEAD NECK AND ROCK.

Over Nantucket Shoals in a Spring Breeze

By B. R. STODDARD

CAPTAIN RUBE is the David Harum of yachting. He started in with a rowboat, and, by swapping annually, reached the point where he owned a fast 25-footer, with which he cleaned up everything in his class on the Sound in the vicinity of New Rochelle. This was almost the height of his ambition, but the habit was strong, and he again traded for a boat, better constructed probably, and with more comfort and convenience, but perhaps not quite as fast. Thus the captain became owner of the sloop yacht Intrepid, 40 feet over-all, 26 feet waterline, with 9 feet 6 inches beam, and spreading about 1,000 square feet of canvas in her jib and mainsail.

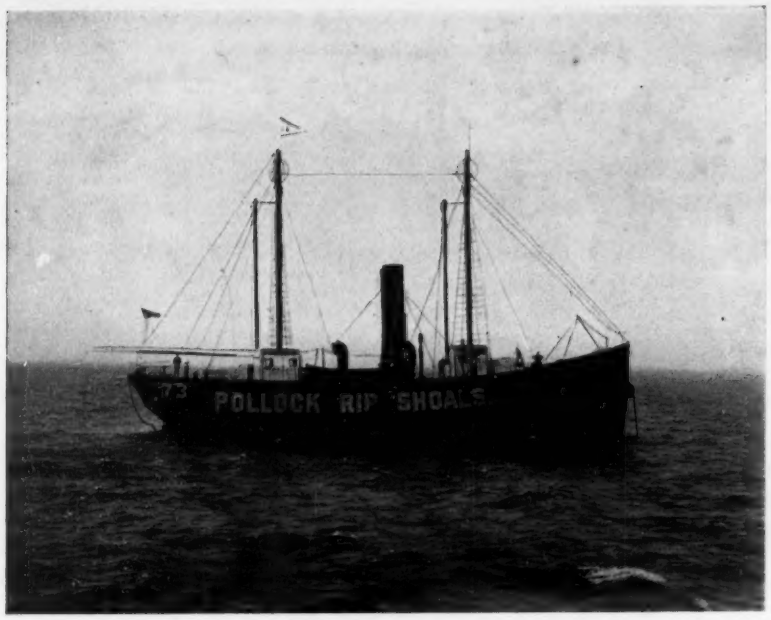
'Intrepid had wintered at Marblehead, and the first move was to organize a crew to bring her to New Rochelle. So the Pilot, Mate and Commodore were engaged for the trip, and on Saturday, May 1, all had foregathered at Marblehead with everything in readiness for the start.

The wind had been blowing heavily from the northeast for three days and was abating. The commodore had never done any yachting on deep water before and was in no hurry to start. Likewise the mate, while having a record as a deep-sea sailor, made in races to Bermuda in a yacht smaller than Intrepid, showed no great anxiety to leave the comforts of the harbor. But the Captain was eager for the fray, as was also the Pilot, who likewise has a reputation as a racing skipper on the Sound and as a foremast hand on ocean racers. With these contending interests some delay occurred, but sail was finally made and Intrepid slipped her mooring about 4 p. m. and, proceeding out of the harbor past Halfway Rock, stood on her course toward Highland Light.

It was raining, the wind was northeast and dropping rapidly, but the boat rode the long "old swell" easily. The Commodore, having the least experience, naturally undertook at once to call the turn on the weather and prophesied a calm presently and then a northwester before morning. The others seemed willing to take what came, blow high or blow low. For the next few hours Intrepid averaged about 4 knots; then the wind fell flat, followed shortly afterwards by a fresh breeze, which hauled a couple of points, coming out of the north. It was decided to shorten sail a little, which was done with alacrity, the Commodore pleading for two reefs instead of one "because it was easier to put them in while it was still daylight and easier to shake out than put in." But the old-timers ignored his protests and advice and tucked in the single reef only, and Intrepid proceeded with a fresh and fair wind, under comfortable sail. Just before the breeze struck in preparations had been made for supper, and after reefing, the crew partook of the meal. But, lo! the Mate, hero of many off-shore races, plainly showed signs of distress, and soon paid tribute to Neptune. This pleased the Commodore immensely, as he had so far succeeded in staving off the final symptoms, but the Mate emphatically denied that he was seasick, saying it was the kerosene in the coffee, the contributory influence of the kerosene being conceded by all.

INTREPID.

Later, the wind hauled slightly more to the westward and Intre-



THE GUARDIAN OF POLLOCK RIP.

pid, on her course, carried it on the end of the main boom, so that the various helmsmen had to watch her closely to avoid jibing as the swells threw her stern around. Highland Light was passed at midnight, and the course changing to westward, the moon coming out bright and clear, and the wind coming fair and strong from the northwest, gave most favorable conditions. The Captain and the Pilot were jubilant, and the Mate and Commodore nearly so, in spite of their sensations caused by the confused seas. About this time the Commodore explained to the Mate the efficacy of beer as a cure for seasickness and from time to time reminded the others of his ability as a weather prophet. As all was going well the Captain and Pilot were soon ensconced in their bunks. The Commodore is still puzzling as to how the Pilot managed to sleep on the windward bunk and stay there in spite of the heel and jump. Taking watch and watch, the trip down Cape Cod was splendid, and everything pointed to a very propitious voyage. Pollock Rip Lightship was rounded at dawn and sheets trimmed for Shovelful Lightship, the wind gradually hauling more to the westward and dead ahead. The Mate and Commodore, taking their trick below, were awakened about 8 a. m. by the pilot's calm announcement that the jib had carried away "again." It developed that the clew of the No. 1 jib had been torn out, and, as the wind continued to freshen after the jib had been "bobbed," the clew carried away again. The Commodore was commencing to lose interest and wondered whether he could best avoid seasickness by lying quiet in his bunk or by going out into the air of the cock-pit, but the Mate jumped up and, with the Pilot, endeavored to take in the torn jib, the Captain being at the wheel. Presently the Captain sung out to the Commodore to come on deck, and on doing so he found things somewhat enlivened.

Intrepid was nearing Handkerchief Lightship; the wind had increased to about 25 miles an hour, coming directly from the west, and, with the tide running westward, a very nasty sea was running over the Shoals. The bowsprit being round and fairly long it was difficult to get out on the end of it, or to get inboard again, in the absence of foot-ropes. However, the Pilot, in boots and oilskins, stood on the end of the bowsprit, with the water often breaking over his boot-tops, gazing at the mess of the jib fouled around the bob-stay, and the Mate on the bow, similarly appareled, was tugging away trying to get the canvas in. The Commodore lent such mild assistance as he could, but all to no purpose, until finally a boat-hook was passed and, after some fishing around, the Pilot succeeded in clearing the jib away from the bob-stay and the three managed to get it on board and into the cock-pit.

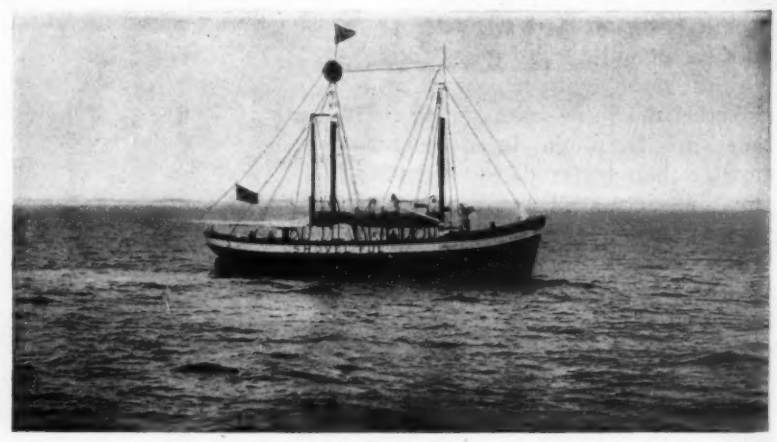
Meanwhile, the Captain had been having his own troubles. With a single-reefed mainsail and no jib the boat was hard to handle. As she was kept off she would be knocked down, would walk up into the wind, and then the seas would throw her backwards, so that it was all the Captain could do to keep her off the Sirloin, which was a 14-foot dory, purchased at Marblehead and being towed to New Rochelle for delivery to a friend of the captain.

The name painted on the stern of the dory was Sirion, but immediately on leaving Marblehead the Mate re-named her, to the great joy of all. The Sirloin was ceasing to be a joke, however, and only by reversing the wheel as the boat was thrown back by the seas did the Captain manage to keep her from under the stern of Intrepid. Even at that the yacht got one bump, which, fortunately, did no serious damage.

After getting in the jib a very small staysail was set from the stemhead, and the crew was ordered to put in the second and last reef, which operation was finally performed successfully, and the captain was again able to get Intrepid going to windward. All hands were thoroughly wet and cold. It was now Sunday morning, 9 o'clock. As the morning wore on the wind increased, possibly to 30 or 35 miles per hour. The boat took considerable water over the bow and down the side of the cabin-house into the cockpit, while occasionally some would come over the lee side of the cockpit rail. More or less of it sifted down through the skylights, until about everything below was soaked and the water in the cockpit worked down through the staving and into the bilge; but as far as could be observed the hull was perfectly tight. Nevertheless, it was necessary to ease up every half hour or so in order to pump out the water from the bilge and from the cockpit. Because of the heavy sea the quarter lifts were set up on the weather side; but this duty was overlooked on one occasion, and in putting about, the boom, swinging low, struck one of the cabin-house doors and tore it from its hinges. The Sirloin, with a short line, towed with her bow tilted well upward, and as she took in barrels of water forward that ran out of the stern, she followed along about half-submerged and was a serious drag on the yacht working to windward in a heavy sea.

After passing Cross Rip Lightship the wind increased slightly; and though Intrepid was doing magnificently under the many adverse conditions, the Commodore could not help wondering what would happen if matters became worse. Even the old sea dogs who composed the rest of the crew looked a little grim at times. But, to pass over this part of the trip briefly, Intrepid succeeded in dropping anchor safely in Vineyard Haven at about 4 o'clock Sunday afternoon.

On April 29 the ketch Surprise, in charge of the "Regatta Committeeman" and "Captain Slocum," both friends and fellow club members of Intrepid's crew, had left Marblehead some 54 hours earlier than Intrepid. Aboard Intrepid it was supposed that the previous strong east winds had caused the Surprise to put into



SHOVELFUL LIGHT-VESSEL ON THE HIGHWAY OVER NANTUCKET SHOALS.

Provincetown, which turned out to have been the case. It was learned afterwards that she left Provincetown early on Sunday morning and thus rounded Highland Light four or five hours behind Intrepid. Therefore, just before the Surprise arrived at the Shoals she caught the full force of the wind. Her crew decided not to try to drive her over the Shoals, but, instead, put on the storm trysail and hove her to. She was blown some 35 or 40 miles out to sea, and her crew eventually gave it up, went below and lashed themselves into their bunks, and only succeeded in reaching Hyannis, Mass., on May 4. The crew of Intrepid, having a thorough respect for the seamanship of the "Regatta Committee" and "Captain Slocum," can only congratulate themselves on having been further on their way when things got so "hot," and on having the more powerful boat.

On arriving at Vineyard Haven the anchor was dropped close to the fine Gloucester fishing smack Pontiac. The crew of Intrepid were invited aboard the fisherman by her captain, and the seventeen men of Pontiac's crew, including Captain Nicholson, did everything conceivable to make them comfortable. Clothes were dried out at the galley and cabin stoves and a hearty and

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OFF THE EASTERN END OF FISHERS ISLAND.

well-cooked meal was served, while all on board vied with each other in lending or giving clothes to the crew of the yacht. During supper a couple of the fishermen even insisted on going over and hanging out the yacht's riding light. Later in the evening the yachtsmen returned to Intrepid greatly refreshed and ready for a good sleep. They were invited aboard the smack for breakfast next morning, which favor was declined, as they felt that they were already under more obligations to the fishermen than they could ever hope to repay.

The next day, Monday, continued clear, but with the heavy westerly wind still blowing. The crew of the Pontiac prophesied a tough time in Vineyard Sound, and seemed surprised that Intrepid proposed to tackle it again. Nevertheless, at 10 a. m. the latter again proceeded under double-reefed mainsail and small staysail, with the intention of reaching Newport. The tide was fair and good progress was made, in spite of the rough sea and head wind. As the yacht sailed through Vineyard Sound, the wind gradually decreased, and toward noon the staysail was replaced by the No. 2 jib. A little later the second reef was shaken out. After passing Cuttyhunk at 2 p. m., the course bearing away more to the northward, sheets could be eased, and it was decided to try to put her through to New London. The last reef was shaken out and full sail carried, except that No. 1 jib, being out of commission, No. 2 was the only one available. Block Island was abeam about 8 p. m., where the breeze freshened again, working up quite a sea, and Intrepid commenced to lug her sail, as the crew was unwilling to reef if it could be avoided. A good land-fall was made, and after picking up the bell buoy off Watch Hill about 9.30 p. m. the smoother water of Fishers Island Sound was successfully negotiated and the anchor was dropped in New London Harbor at midnight. Off Watch Hill the breeze had increased considerably and the peak was slacked, but even then Intrepid had all the canvas she could possibly carry. It was 3 a. m. when the weary crew turned in, after a good meal, with a sense of satisfaction at the fine run made.

At 7 a. m. the next morning, Tuesday, the Captain put the Mate and Pilot ashore, and at 9 a. m. the Captain and Commodore made a fresh start. Variable breezes were encountered going out of the river, but once outside a good, seasonable southwester was met. Owing to the short crew and fresh wind it was decided to put in a single reef, especially as the boat would thus be better balanced in the absence of No. 1 jib. Of course, no sooner was the reef in than the breeze decreased slightly.

During the day the wind varied from west to southwest, and with a head tide until after 4 p. m. but poor results were accomplished. However, the southerly breakwater off New Haven was neared about 10 p. m., and the Captain and Commodore congratulated themselves on the prospects of supper and sleep, as by this time they were tired. Intrepid, tacking back and forth, seemed, however, to work but slowly toward the breakwaters, though it was not until after midnight that the hope of getting in behind them was abandoned, the airs proving too light to enable the boat to stem the tide rip coming through. Finally, the anchor was let go close to the outside of the breakwaters, where she was quite safe in anything but an easterly wind, and wind from that direction seemed improbable. After cooking and eating, the tired crew again turned in at 3 a. m. At 6 a. m. a light breeze from the southeast sprang up, causing them to turn out and make sail early rather than be caught on the weather side of the breakwater in case the breeze freshened. The wind, instead, decreased, and subsequently hauled to the south. Stratford Point was passed about 10 a. m. when the balloon jib was substituted for the work-

ing jib. The breeze continued light from the south and southeast, and Eaton's Neck Light was passed about 4 p. m., progress continuing slow against the head tide.

A freight schooner had been working the north shore of the Sound and had beaten Intrepid some three or four miles. Off Oyster Bay a good southwesterly breeze could be seen inshore, and the yacht was worked in toward it and, getting it finally, found all she needed and at once commenced to pull ahead at a speed of about 7 knots. It was then observed that the schooner was in a soft spot, and that she was trying to work across the Sound for the southwesterly breeze. As dusk fell Intrepid was off Glen Cove and the schooner was at Oak Neck Point, Intrepid having regained her lost ground and beaten the schooner several miles in addition. The Captain and Commodore conferred, and decided that it was their knowledge of local conditions that had enabled the yacht to beat the schooner. The comments of schooner's Captain were probably unprintable.

As usual, on working away from the south shore toward New Rochelle, the southerly breeze was left, and for a while Intrepid was in the doldrums. It was all the more irritating with New Rochelle and home only a mile or so away. But after dark a northerly breeze came off the land, and with balloon jib still set, Intrepid and Sirloin came into the harbor of Echo Bay at 8.30 p. m., May 5th, and the tired Captain and Commodore were congratulated by their clubmates. It had been rather a strenuous voyage, but an experience that neither would have cared to miss.

The Growth and Trend of Power Boat Racing

By HUGH S. GAMBEL

Secretary of National Association of Boat & Engine Manufacturers

THE rapid growth of interest in the motor boat, whether used for racing, for pleasure purposes or commercially, is worthy of notice at this time, especially as we are on the eve of one of the greatest marine celebrations that this country has ever seen—an event held to commemorate the first successful operation of a boat propelled by machinery, in which steam was the motive power, which strangely comes at a time when the internal combustion engine is in a great measure supplanting steam.

When water transportation was solely by means of sailing craft, that had to depend upon wind and tide, there were those that had grave doubts of the successful operation of a vessel using steam for power. It took some years for the reliability of this new-found power for marine work to set at rest all doubts as to the future, and when it was assured that boats would be using this power there was great rejoicing. History often repeats itself, and it has done so in the case of the internal combustion engine for marine purposes. As with steam power, when the first internal combustion engine was brought forward, there was the same feeling of doubt. While the internal combustion engine had given good satisfaction for stationary purposes, the motors were of a very heavy type, and attempts to use this type of engine for marine purposes met ridicule that was even greater than that which greeted the introduction of steam. Despite frequent disappointments and failures, the reliable internal combustion engine was produced, necessarily of lighter construction and weight. Little by little the public has become better acquainted with this type of engine, and it has taken hold to such an extent that it is fast supplanting steam in many branches of marine work. This interest in the internal combustion engine has been brought about from the fact that its reliability has been fully demonstrated; that it is easy to control, and boats equipped with this type of engine can safely navigate any waters where steam vessels can go.

The simplicity and inexpensiveness in the matter of operation of the internal combustion engine are what have appealed strongly to all lovers of the water, together with the small amount of space it occupies and the avoidance of ashes, coal and the necessary dirt of a steam plant.

The American people are, to a large extent, a sport-loving nation and take a leading interest in yachting and all that pertains thereto. It is no wonder, then, that motor-boat racing has become popular in this country all the way from the Atlantic to the Pacific coasts. There is hardly a country in the world better adapted to the use of motor boats, or one that offers as many suitable waters for racing purposes. With its innumerable lakes, bays, rivers and harbors, good courses can be laid out where the boats may be witnessed for the entire distance from various points of vantage. What the growth of racing in this country has been, can best be ascertained from the number of events that have taken place within the past few years. Where formerly there were a handful of good racing boats there are to-day thousands; where but a few events were held, principally in the East, there are thousands in all parts of the country. While racing, at the beginning, was confined altogether to the high-speed boat, pleasure boats have gradually made their appearance in these events, until it is nothing unusual to see anywhere from twelve to thirty of this type in a race.

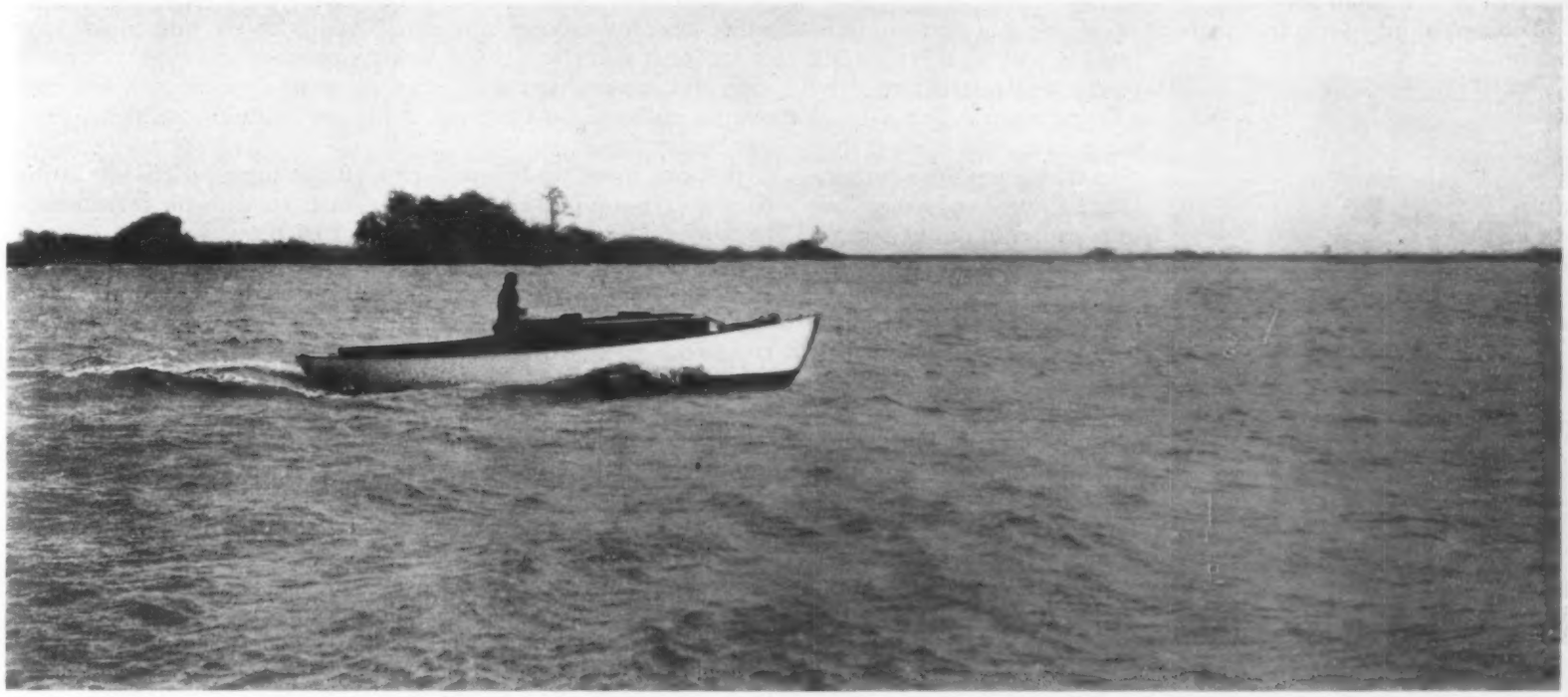
Racing motor boats to-day are not all pure racing machines. While built for racing purposes, probably nine-tenths of them are serviceable as express runabouts, carrying anywhere from two to six people, according to size. Although very lightly constructed, they are strongly built, as it is essential that they should be able to withstand the wear and tear to which they are subjected; and for sheltered water they can be used in many useful ways. As in many other sports, the cost of motor-boat racing depends largely upon one's means. Naturally, in the larger classes of boats the cost may seem high, but the cost in the smaller classes, that is, boats of 12 metres and under, is not as heavy as one might suppose. The initial outlay may appear large; but if the boat proves successful in winning prizes, the owner is almost certain to be able to sell his craft at the end of a season at a figure where the loss, if any, will be but trifling.

There are many who believe that a racing boat can be turned out at a moment's notice, never stopping to consider the fact that, being of very light construction, the greatest care and attention must necessarily be given to the building of hull and engine. A good three months should be allowed before starting a boat in a race for tuning up and overcoming all troubles that may develop by hard running. While boats of this type are delivered by the builder in good running order, and may have had one or two successful trials, there are still possibilities that it may not be running smoothly and that some alteration or readjustment will be necessary.

Being prepared for a race does not mean solely the preparation of the boat, but also familiarity with the conditions. On receiving the instructions, note them carefully, and see that you comply with all the rules and regulations. There are a number of owners of fast motor boats who have handled sailing craft for many years and who are familiar with racing rules, but, on the other hand, there are a great many who have had less experience in matters

of this kind, and it is very often a great source of annoyance to the regatta committee to be constantly required to answer a number of questions that are unnecessary if one were to read over carefully the printed instructions that have been given out. It is not generally realized, but it is nevertheless a fact, that much valuable time is given gratuitously by members of regatta committees, and that they go to much trouble to give out explicit information regarding a racing event.

In this country, motor boating as a sport has made wonderful strides during the last three or four years. A few years ago racing throughout the West was unheard of, while to-day throughout that section it has grown to very large proportions.



IN LONG-DISTANCE RACING THE CRUISING BOAT PLAYS AN IMPORTANT PART.

Not alone is this true of the West, but through the South as well. Hundreds of yacht clubs are being organized every year, the majority of members being those never before identified with a club of this character, thus showing that in so far as racing is concerned it is not by any means confined solely to the East. While, perhaps, the East may be possessed of a greater number of fast boats, yet the time is coming, and is not far distant, when there will be inter-sectional contests between the fastest boats of the East, West, North and South.

To those who have been present at some of the racing events held in former years, there has not appeared the interest shown by the spectators that might be expected. In some racing events, the courses have been laid out on inconvenient and out-of-the-way waters, great distances from shore, where only those possessing a motor boat or steam yacht could watch the contestants as they went over the course. Looked at from the standpoint of a spectator, it is a mistake to send motor boats over a long course where it is impossible to follow the movements or relative positions of the competitors throughout the race. Something more should be provided than the chance to watch the start of a race, and, if one has the patience to wait a long time, to witness the finish, or await the mere announcement of the results given out by the regatta committee. While racing is primarily to provide sport for the competitors, it is only from the interest of the spectator that we can ever hope to draw him from his present position into that of an owner and future competitor. This can only be done by enabling him to follow the race in its entirety, and the manner in which some courses are laid out is not likely to promote this end.

There is probably no type of boat in which such interest is being taken as the cruising boat. As to the racing situation, so long as the rating and handicapping is good there will always be the element of uncertainty which is essential to interesting sport, and the racing of pleasure boats will, under such conditions, become greater and greater, and will outstrip that of purely high-speed boats. The cruising boat, aside from its ability to participate in racing events, is purely a pleasure boat. Some of them are equipped with a semi-speed engine, though the greater majority have the slow-speed, heavy duty motors. If one desires to explore a country thoroughly, gain an intimate knowledge of its people, or properly appreciate those touches of local color that lend half the charm to such a trip, it can be done best by an inland water cruise.

A camera and log book are all that are required to give a lasting record of a pleasant and instructive ramble. There is an unlimited choice of routes that is offered in this country to the owner of a pleasure boat, and there is nothing so restful, so enjoyable, and at the same time nothing that so broadens one's views of life, as a cruise through the inland waterways or along the coast. The motor boat of the hunting-cabin type is the ideal craft for this sort of work.

For use in commercial boats the internal combustion motor is rapidly taking the place of sail or steam. For carrying passengers it is a safe, speedy, economical boat. It is nothing unusual to see tow boats, propelled by an internal combustion engine, having in tow several craft passing through the various canals or rivers. The large freighters that have heretofore depended solely on wind and tide are being equipped with an engine as an auxiliary power, thus making faster time and more trips than if dependent solely upon the wind. In fishing vessels, and in fact every line of the fish industry, it will be found that sails are being discarded for the motor, for the purpose of getting cargoes to market in a short space of time. It will be readily seen that the motor boat is bound to become the boat of the future. What the true extent or progress will be remains only for the future to tell. That it is admirably serving its purpose cannot be denied, and that its development will be along even broader lines is a foregone conclusion.

Cruising from the Hudson to Lake Champlain

WITH FULL SAILING DIRECTIONS FOR THE UPPER HUDSON AND CHAMPLAIN CANAL

By W. W. BRINKERHOFF

AT the beginning of this article, I should like to say that, as well as being the account of a two weeks' trip taken last August, in a 23-ft. motor boat, from New York to Lake Champlain and return, it is intended to serve as a guide or reference to any who may contemplate taking this or any other inland trip in a small boat.

To many it may seem that there is no pleasure in cruising in so small a boat, as there cannot be the comfort afforded by a larger craft. But a small party, in a small boat, if they plan things well, can certainly get a lot of enjoyment out of a cruise. On our trip we met a number of boats under thirty feet that were so poorly packed that the three or four occupants had little or no room in the cockpit for themselves, whereas we were at no time uncomfortably crowded, though of course I'll admit there is a big difference in boats.

THE CANOE TENDER GAVE VERY LITTLE TROUBLE.

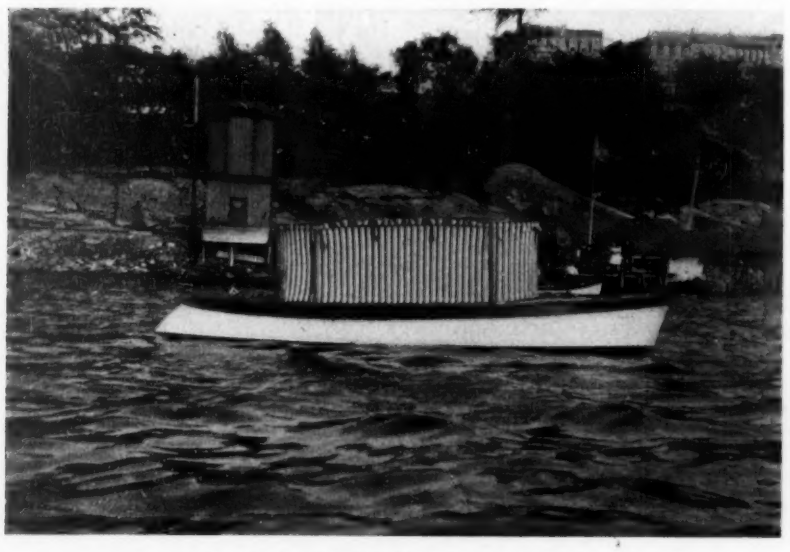
Spark was the name of our craft, and she measured 23 feet over all, 5 feet 8 inches beam, drew about 20 inches, had about a 12-foot cockpit and was driven by a 5 H. P. Buffalo motor, which gave her an average speed of eight miles per hour. For protection against the night air, she had a light standing roof and storm curtains. A thirty-gallon gasolene tank was under the forward deck, while lockers were under the seats on both sides and there was some stowage space in the after hatch. We carried 120 feet of mooring cable and our large anchor on the forward deck, where it was always handy. In the aft hatch we kept a spare anchor, and line, extra cans of motor oil, our canned goods and cooking utensils. Under the seats we used one locker for the ship's lights and a lantern; one for our clothes; one for blankets, which we kept wrapped in rubber ponchos, so as always to have dry bed clothes; one for tools; one for white enameled cups, plates and bowls, and the rest were packed with provisions and canned stuff. We also took extra parts for the motor, and some canvas and white lead for making temporary repairs to the hull of the boat or tender if necessary. The locker seats were covered with cushions, which were quite wide, and one of us slept on each side, and one on cushions on the floor, using air pillows on which to rest our weary heads.

Just one more tip before I cast off the lines. Before starting have everything packed, for if you start out with the intention of packing under way, in nine cases out of ten it won't be done at all, and the junk will be in your way most of the time.

At eight A. M. on August 15th, we left the Columbia Yacht Club of N. Y., and headed north with the tide just starting to run flood. There were no pangs of regret at leaving the noise, heat and troubles of the city for a care-free life. When we reached Dobbs Ferry, we began to feel the effects of the northwest wind that was cutting Tappan Zee, the widest part of the Hudson, into a choppy sea which sent the spray well up on the forward deck. We headed up the west shore for Rockland Light, which was passed about noon, and entered what is known as Haverstraw Bay.

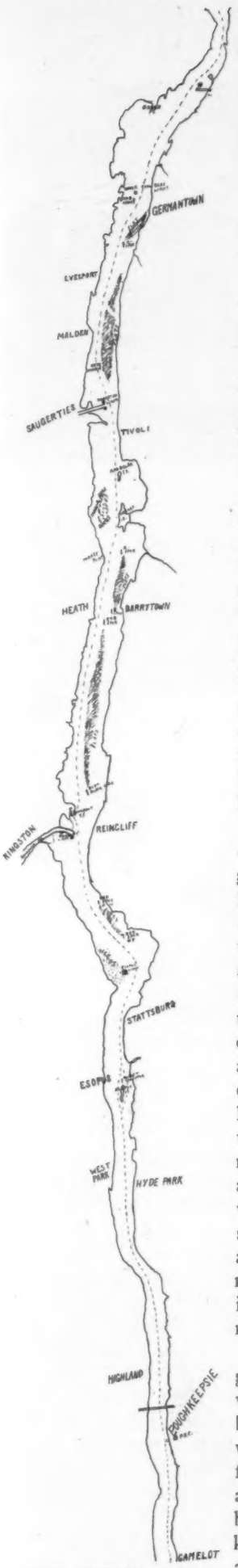
Five miles further on we passed Stoney Point with its white light house on top of the hill. By the time we reached Peekskill, the wind had died down and it was smooth sailing. So far we had plenty of water, but if you try to run close into Peekskill, look out for a big weed bed. It is best to keep a little to the west of the center of the river. Two miles more and the government magazine station on Iona Island was passed and we turned north under the towering heights of Anthony's Nose.

Keep a sharp eye for weeds in passing the West Point reservation, as there is a bank of them that extends well out from the Point shore, and I can vouch that they are an excellent crop of that troublesome water growth. Through the remainder of the Highlands, you will find clear sailing and beautiful scenery. In fact one might almost think he was passing through a small



SPARK AT ANCHOR OFF RIVERSIDE DRIVE.

WHERE THE MOUNTAINS DROP INTO THE HUDSON AT ANTHONY'S NOSE.



THE HUDSON ABOVE POUGHKEEPSIE.

canyon for some ten or twelve miles. After passing Polopus Island on the starboard bow, be sure to keep well off the east shore, as the flats run a quarter of the way across the river, and are the cause of many craft running aground through neglecting to keep a sharp eye ahead.

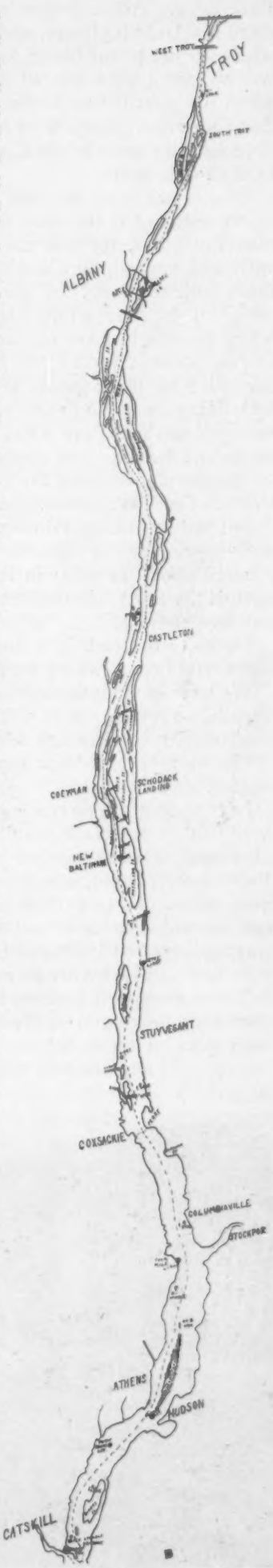
Fishkill on the east shore is soon passed and opposite the west shore is the old Dutch city of Newburgh. Just north of the city there is a fine yacht club, "The Dock Rats." Here you may get gasolene at a reasonable charge, and are sure of a most courteous welcome from the club steward and the members. We passed at 3.30 P. M., not stopping, as we were out to make time, and reserved the pleasure of calling for our homeward trip.

After rounding the point on the west shore at the head of Newburgh Bay, where there is a light house, you can see, well ahead, the Poughkeepsie bridge spanning from hill to hill, and in its silent way notifying you that about half the distance to Albany has been completed. Just south of the ferry dock is the Poughkeepsie Yacht Club, where we stopped at 5.40, having made a continuous run of over nine and a half hours at the rate of a little over eight miles per hour, including our slowing down while bucking the head seas in Tappan Zee.

We lingered here long enough to taste of the hospitality of this club, take on 15 gallons of gasolene and decided to run a little further before anchoring. About seven o'clock we let go our hook on the west shore four miles north of the bridge and about 100 feet off shore in about 30 feet of water. We packed our cooking utensils in the canoe and went ashore for dinner, after which we returned on board and turned in. We all noticed the odor of gasolene, but could not find where the leak was. With an electric flash light, which we often found handy when running at night, we looked over the piping and all was tight, so knew that if there was a leak it was in the pipe on the outside of the boat, for the feed pipe ran along the keel from the tank to the motor. Realizing that we could do nothing until daylight, we turned in once more.

On awaking, we could still smell the gasolene, and when we looked at the water over the port bow, gasolene could be seen bubbling up and floating away with the tide. This was about half-past five A. M., and as soon as we could get ashore, eat our breakfast and back on board again, we started back for Poughkeepsie in quest of a marine railway. On arriving at the yacht club, we were relieved to find they had a runway which was not in use. It did not take us long to run the car down in the water and to swing the windlass around and haul Spark free of the water. As the pipe was on the port side, we tipped her to starboard and got right to work, even if it was Sunday. The pipe had broken at one of the couplings, and had been emptying our tank to the tune of eight gallons over night. The way we tackled that job was a caution, as we were anxious to get as far north as possible. We had a good morning's work, however, and were helped by one of the club members who came over and worked with us for over an hour. The Poughkeepsie boys are all right and you may count on them to help you as far as they can. At noon Spark took to the water again, and we gave the tank 10 gallons of gasolene, and at half-past one started north.

About two miles beyond the bridge, on the west shore, is an old dock, and should you want some excellent spring water, stop here, walk across the railroad tracks and you can get ice water right from the ground. After leaving here you have clear sailing and soon the river describes a big letter "S" and up ahead may be seen Esopus Island. It is safe to pass on either side of this. Two or three little coves in its shores make very good places to run in a small boat for the night, only look out for the ledges of rock. The channel from here follows the east shore to Esopus Light, about 3 miles further, which leave on the port bow and then alter your course to the northwest. There are plenty of weeds here to look out for, but by keeping about the middle of the river and leaving spar buoys No. 8 and No. 10 well to starboard, you will have no trouble, and then can run close to the point, where the railroad tunnel is seen. The next picture—for every turn of the river reveals a new and entirely different scene—is Kingston Park, on the west shore, with light houses at the entrance to Roundout Creek, some 4 miles from Esopus Light. About opposite the Roundout Yacht Club is a red and black spar buoy, with a channel running up both sides, but the west one is the best and easiest to follow. At low tide the flats that separate these two channels may be seen, but at no other time, so keep about 100 yards from the shore and you will have clear sailing past East Kingston and



FROM CATSKILL TO TROY.

Barrytown. About 7 miles north of Kingston on Turkey Point, there is a large ice house, and dead ahead is a big bunch of rocks, which are not to our liking, known as Saddle Bags. At starboard will be seen a light-colored summer house on Cruger's Island, so when just past the ice house cross over to the island and run up that shore and alongside of Magdalen Island until the twin lights at Saugerties come in sight, a little less than 4 miles above, which hold close to port.

Now, from here, for just a minute, look up in the north and northwest, and if the view doesn't surprise and appeal to you I miss my guess, for you can see the Hudson Valley for a long ways and, beyond, the Catskills in all their blanket of green. But don't look too long, for there is a nice flat ahead. About the center of the river, a mile further on, you will see a beacon light, which be sure to leave to starboard and then hold the west shore up past Malden, West Camp Landing and the red buoy there. Up ahead is a big black spindle known as Upper Coal Beds Light, and by holding this close to port you will have plenty of water. From here you can make out a red beacon and, by running up the east shore and leaving it to starboard, you can follow the easy bend of the river north until the big yellow ice house at the mouth of Catskill Creek is reached, some 11 or 12 miles from Saugerties.

We had just finished dinner when we swung into Catskill Creek and stopped at the Catskill Yacht Club at 7.15 o'clock, having covered about 40 miles in less than six hours, part of the way against the tide. Up the creek a short way there are two or three gasolene stations.

Opposite the club is a fine sheltered place to anchor for the night, and here is where we planted the mud hook.

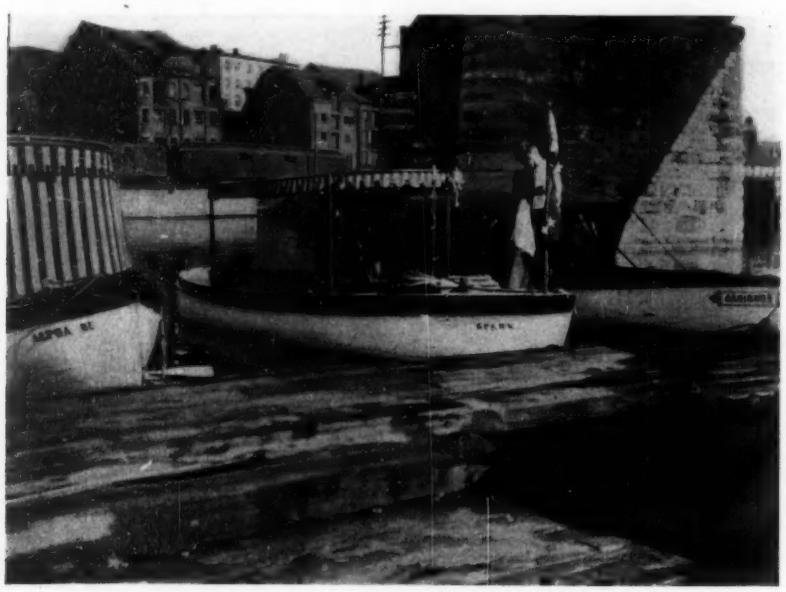
We were anxious to make up the half day we had lost at Poughkeepsie, so roused out at 5 A. M. the next day and found one of those nice, raw mornings with the rain coming down in torrents.

We were prepared for such weather, so donned oil skins and started.

In turning north on coming out of the creek, hold the west shore until you see the black spindle, which you can run close to. The next mark is a red spar off the end of Rodgers Island, and then Percy Reach Light, which leave to port. This is as far as the government charts go, but all the way you will find the channel well marked with buoys and lights, so by remembering that on the way up leave red spars and lights to starboard, and black ones to port, you will have very little trouble.

The next mark is Hudson Light, 4½ miles from Catskill, which marks the lower end of Hudson Flats. There is good water on both sides of these, but we took the west side and ran close to Athens. If any one tells you there is no tide in this part of the river, it is because he has never been there. There is a rise and fall of tide at Troy of about two feet, and over the shallow places it travels at a good rate. With the tide running out and a southeast gale blowing, we had as choppy a following sea as I have seen on the Sound—in fact one small mountain of water curled up over the end of the canoe and filled her to the gunnels. While trying to right her, the boat came near getting the same thing, so we put into the lee of an ice house dock and tied up, hauling the canoe out on the bank. It was then about seven o'clock, so we ate our breakfast in the rain and decided to wait for the tide to turn and the sea to go down. We waited in vain until after lunch, and the rain having stopped, we started out again, but it was still too much for the canoe and we had to put back and put the craft aboard the boat. We let one end hang over the stern while the other rested on the seat, and it was a surprise to see how much room there was left. In this way we were all right and "Albany or bust" was our motto for that afternoon.

HAULED OUT AT THE POUGHKEEPSIE YACHT CLUB.



TIED UP AT THE ALBANY YACHT CLUB UNDER THE RAILROAD BRIDGE.

We kept away from the flats and soon saw a black spindle and then Four Mile Light, which may be passed close aboard. Just beyond is a red spar and a mile further another one, so by holding to the west of the center you will be all right. The next town is Coxsackie, and just beyond Coxsackie Island, which it is best to keep to the east of. Off its shores will be seen a red and a black buoy with the channel between. Holding close to this and Light House Island you will soon pass a light house, a red spindle and then a red spar. This keeps you pretty well on the west shore, but ahead is Bronx Island, so cross over and run up the east shore. A mile and a half ahead will be seen another stone light house. Head for this, and north past a red spindle heading for New Baltimore on the west shore, 7½ miles above Coxsackie. Here you will find two spindles and the entrance to the dykes, which make easy running by keeping between them and following the beacons on shore. We passed Castleton at 4.30 and before long could make out the dome of the Capitol at Albany. We went right on and at 6.30 stopped at the Albany Yacht Club, where we were most cordially received. To a stranger the club is somewhat hard to find, and it is necessary to continue right on after passing the night boat dock until you come to an opening in the sea wall, when by turning to the left, you will see the fleet tied up to a number of floats, where you can also make fast while in the city. It is right under the railroad bridge and very noisy, so we planned to spend the night at one of the hotels.

After donning our shore clothes, we registered at the Club, and went up to the post office for mail, and then over to a hotel on Broadway, where we engaged rooms for the night and had dinner. (To be continued.)

Pilot Water Navigation

By COMMANDER C. S. STANWORTH

PART I.

INSTRUMENTS AND APPURTENANCES USED IN NAVIGATION

[Note.—This is the first of a series of articles on Pilot Water Navigation, or that branch of Navigation that does not require nautical astronomy, or the use of sextant and chronometer.—Editor.]

Definitions Relating to Navigation.

NAVIGATION is that science which enables one to conduct a ship from point to point on the earth's surface, allowing the mariner to determine with sufficient accuracy the position of his ship at any time. It is divided into two branches, navigation and nautical astronomy.

Navigation in a limited sense treats of the determination of the position of the ship by reference to the earth or objects thereon. It comprises piloting, in which the position is ascertained from visible objects upon the earth and from soundings of the sea, or from dead reckoning, in which the position of the ship is deduced from the direction and amount of a vessel's progress from a known point of departure.

In nautical astronomy, the vessel's position is determined by observations of the sun, moon, planets or stars. As piloting can only be employed near the land or in moderate depths of water, the navigator when at sea must depend upon astronomical observations or dead reckoning. The former is more accurate; but as it is not always available, dead reckoning must often be depended upon.

The earth is an oblate spheroid or a sphere slightly flattened at the poles, its equatorial diameter being 7,927 statute miles and its polar diameter 7,900 statute miles.

The poles are the points where the axis of rotation intersects the surface of the earth.

The equator is the great circle formed by the intersection with the earth's surface of a plane perpendicular to the axle of rotation and passing through the earth's surface.

Meridians are great circles passing through the poles, and hence are perpendicular to the equator.

Parallels of latitude are small circles, whose plane is parallel to the equator.

The latitude of a place is the arc of the meridian intercepted between the equator and that place, or, in other words, the angle at the center of the earth between the place and the equator. Latitude is reckoned north or south from the equator, where it is zero, to the poles, where it is 90 degrees.

The longitude of a place is the arc of the equator intercepted between its meridian and the meridian of some place from which longitude is reckoned, this meridian being termed a prime meridian. For navigation, the meridian of Greenwich, England, is generally accepted as the prime meridian, its longitude being termed zero. Longitude is reckoned east or west from the meridian from 0 to 180 degrees, or zero to twelve hours.

Departure is the linear distance measured in nautical miles that one place is directly east or west of another, and is measured along a parallel of latitude. It varies with the latitude, being equal to the difference of longitude when the two places are on the equator.

The nautical mile, sea mile or knot, is the unit of distance used in navigation, and is equal to one minute of latitude; that is, to the length of that portion of a meridian on the earth's *surface* which subtends an angle of one minute at the earth's *center*. Owing to the earth not being a perfect sphere, the distance is not the same in all latitudes, and the mean or average value, 6,080.27 feet, is used.

The great circle track or course between any two places is the route along the arc of the great circle passing through the two places, and it is the shortest distance between any two points on the earth. Except when the two points are on the equator, or on the same meridian, the great circle course, when laid down on a Mercator chart, is a curved line, cutting each meridian at a different angle, and with the apex of the curve lying away from the equator.

Navigation in Pilot Waters.

By the term pilot waters is meant those waters where navigation is aided by landmarks, buoys, beacons, lighthouses, soundings, etc., and where no astronomical observations are taken. This does not mean that the land is never lost sight of, but the cruises out of sight of land are necessarily short, and position is determined by dead reckoning, knowledge of currents and soundings.

We will first take up the navigation equipment that we should have on a yacht cruising along the coast or in our inland waters, and then explain the use of the various items.

This equipment should consist of charts, lead line, compass, dividers, protractor, parallel rulers, log line, barometer, thermometer, buoy book, tide tables, coast pilot, notebook and pencil.

Charts.

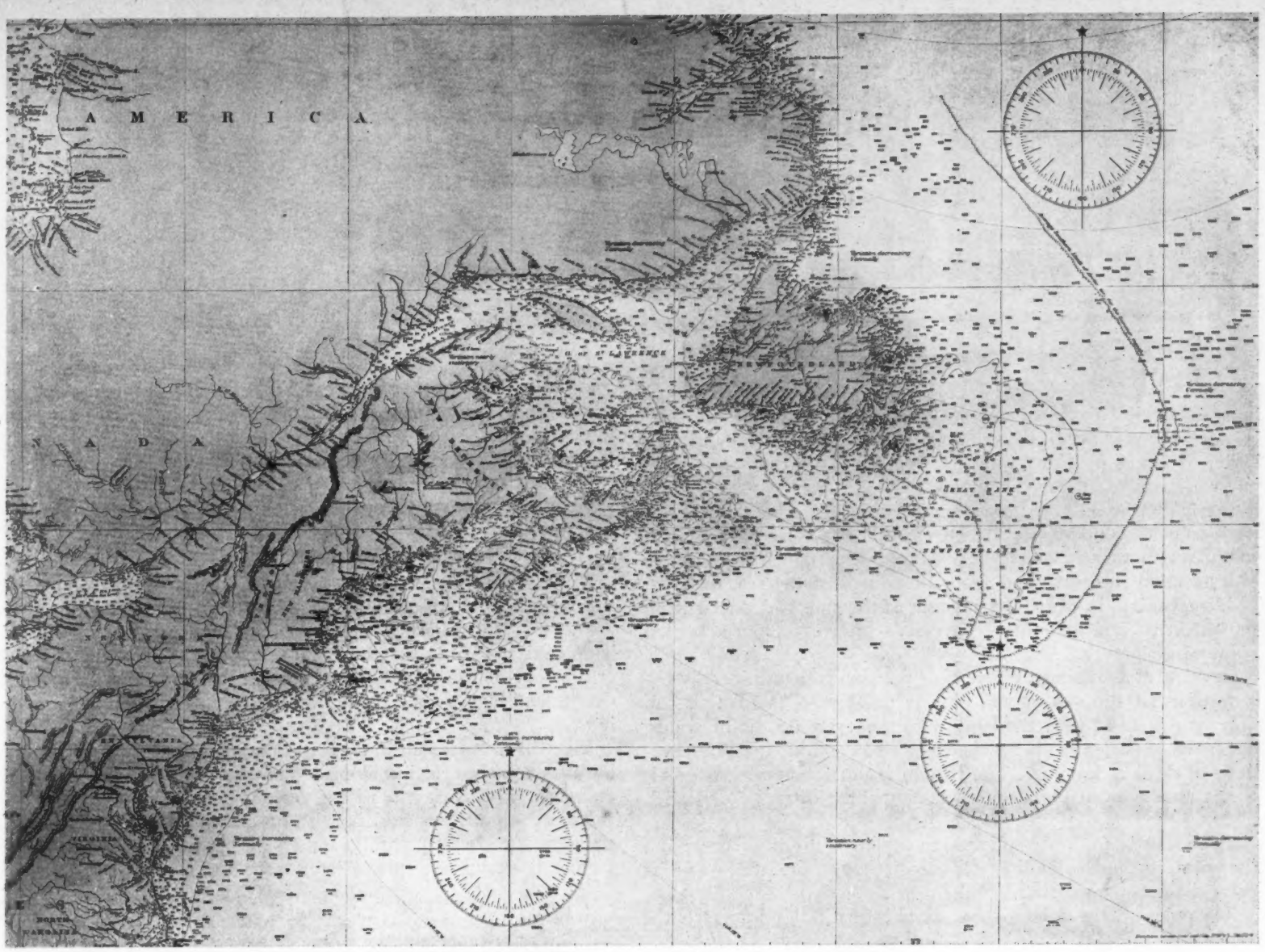
Charts are representations on a flat surface of a portion of the curved surface of the earth, and since this is mechanically impossible in the case of a spheroid such as the earth, various devices are used to make the distortions as little as possible. These devices, called projections, are based on simple mathematical principles, and the distortions can be calculated exactly.

The two principal projections used are based upon the fact that we can unroll the surface of a cylinder or a cone and obtain a flat surface

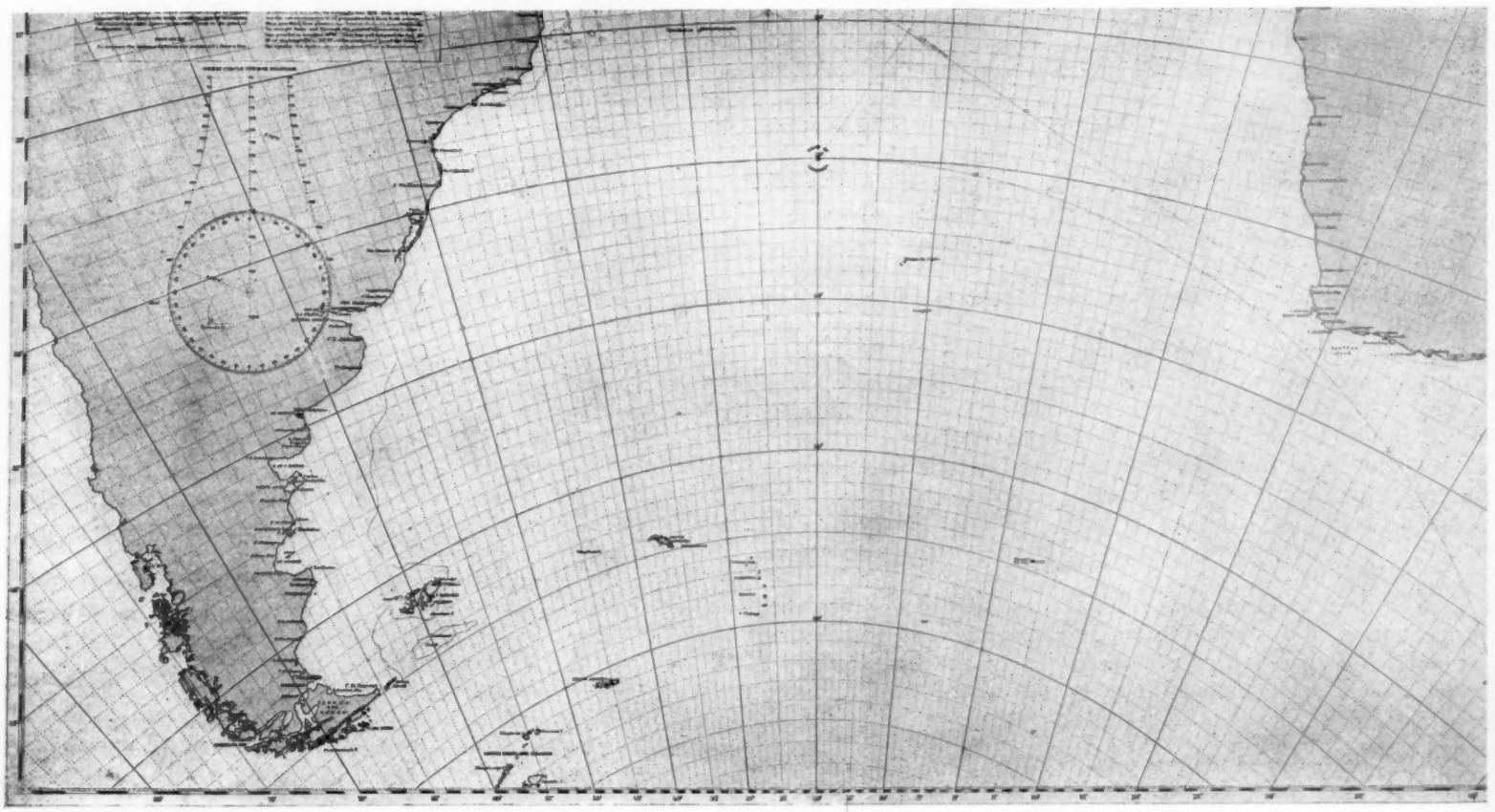
Mercator Projection.

The projection most generally used, particularly for charts covering a large area of surface, is the Mercator. Here the earth is supposed to be surrounded by a cylinder with its axis parallel to the polar axis of the earth and tangent to the earth's surface at the equator. The points on the earth's surface are projected on the surface of this cylinder in such a manner that the loxodromic curve or rhumb line appears as a straight line on the chart. Here I will anticipate by explaining that a rhumb line is a line so drawn on the earth's surface that it intersects all meridians at the same angle, and is the track of a ship steering the same true compass course. This gives a very accurate representation at points near the equator, but as we proceed towards the poles the distortion becomes so great that other systems of projections must be used.

In the Mercator projection, the meridians are projected as straight parallel lines the same distance apart, when in reality they converge, meeting at the poles. The parallels of latitude are also projected as parallel lines intersecting the meridians of longitude at right angles, but the distance apart increases as the secant of the latitude; consequently the charts are distorted, and in measuring distances on a Mercator chart you should take off the distance with your dividers and apply it to the scale of the



NORTH ATLANTIC CHART IN MERCATOR PROJECTION, IN WHICH THE MERIDIANS ARE PROJECTED AS PARALLEL LINES, AND PARALLELS OF LATITUDE INCREASE TOWARDS THE POLES.



GREAT CIRCLE CHART OF SOUTH ATLANTIC, GNOMONIC PROJECTION.

nearest *latitude,* which you will find on the margin of the chart.

The Mercator projection is the one in general use by the maritime nations and by our hydrographic office.

POLYCONIC PROJECTION.

In this projection the points on the earth's surface are projected from the center of the earth upon the surface of a cone whose axis is coincident with the axis of the earth, and whose surface is tangent to the earth's surface at the middle latitude of the locality to be charted. In this projection the meridians, the parallels, and rhumb lines are all slightly curved; but as the area charted is small, these distortions are hardly perceptible. The scale found generally on the lower portion of the chart is applicable to all places on the chart, differing in this from the Mercator.

GNOMONIC PROJECTION.

This projection is used for navigation purposes in the polar regions, but its main use is to afford a ready means of finding the course and distance in great circle sailing.

The plane of projection is tangent to the earth's surface at some

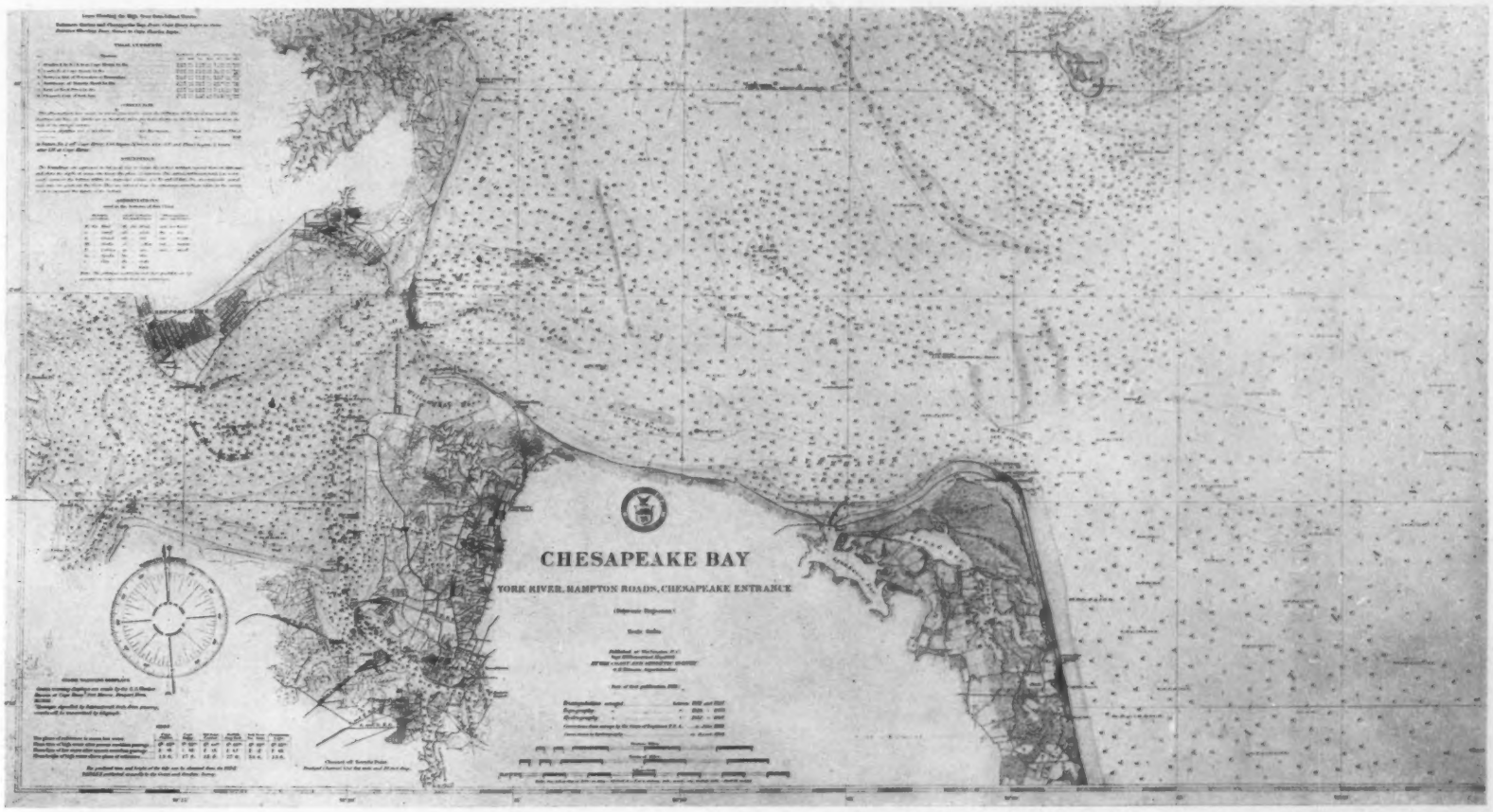


CHART OF CHESAPEAKE BAY IN POLYCONIC PROJECTION. HERE THE MERIDIANS AND PARALLELS ARE SLIGHTLY CURVED, BUT AS CHARTED AREA IS SMALL THE DISTORTION IS HARDLY PERCEPTIBLE.

given point, and the eye of the observer is supposed to be at the center of the earth, the different points on the earth's surface being projected upon the plane by lines drawn from the center of the earth.

In the United States we have maritime charts issued under three departments. The Coast and Geodetic Survey, under the Department of Commerce and Labor, publishes U. S. Coast Pilots, Annual Tide Tables for the whole world, and charts of our coasts and ports within tidewater limits. With few exceptions their charts are based upon the polyconic projection. The Hydrographic Office, under the Navy Department, publishes general ocean charts, surveys made by men-of-war, and reproduces foreign charts, for which there is a large demand. The Army Engineers have charge of the surveys of the Great Lakes and the rivers above tidewater.

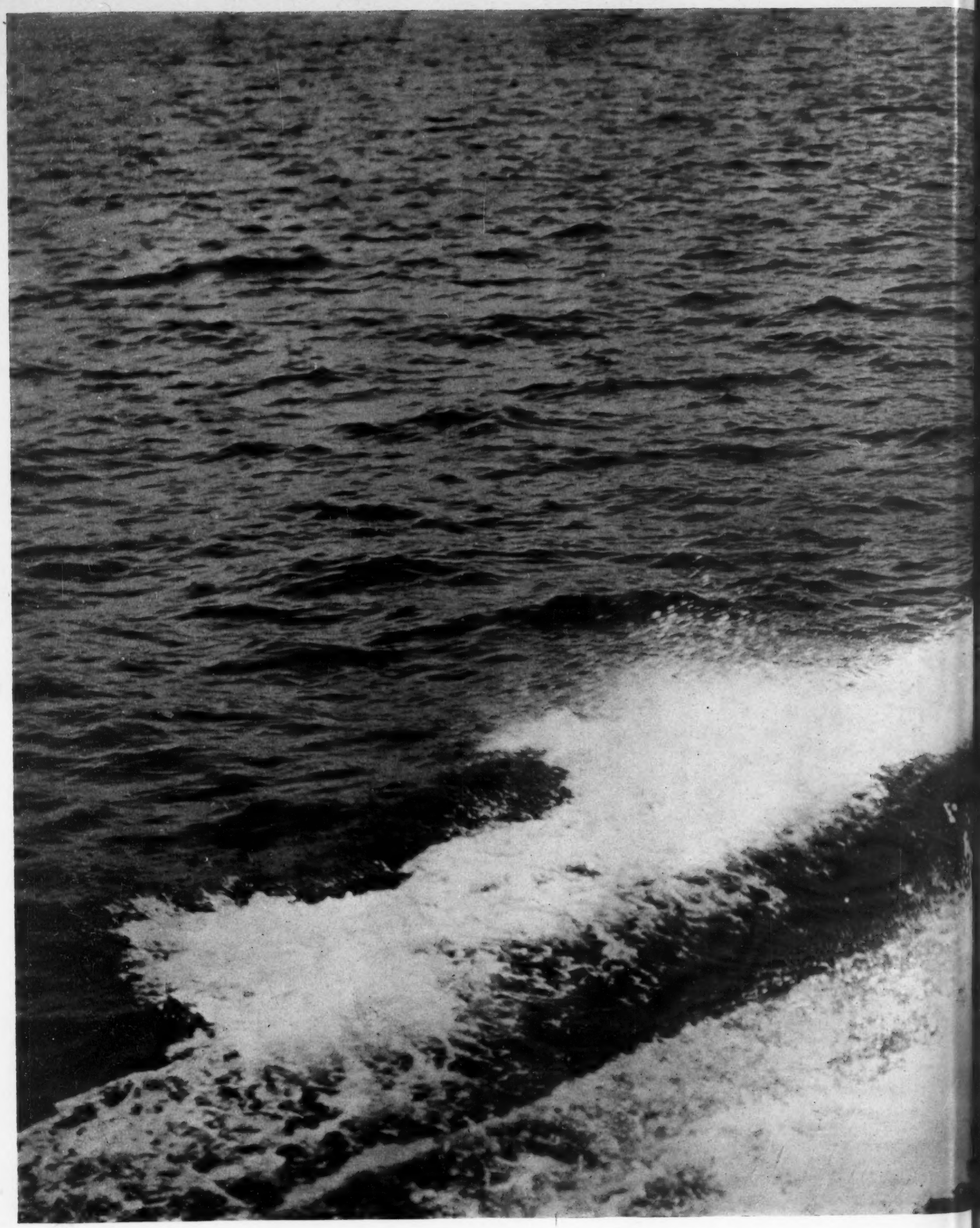
There is a considerable amount of information on charts that is not appreciated by the occasional user, so suppose we take the chart of lower Chesapeake Bay, a locality we are familiar with, and see how much information a stranger could obtain from it if he were skilled in reading charts, remembering that nothing is put upon a chart without good reason, and, consequently, that no detail should escape our scrutiny.

The principal legend of the chart gives the authority for the printed details, also the date upon which this information was obtained; and since this is a polyconic projection, the scale of distances is also given, while in a note stencilled on the outer margin of the chart is the date to which the aids to navigation have been corrected.

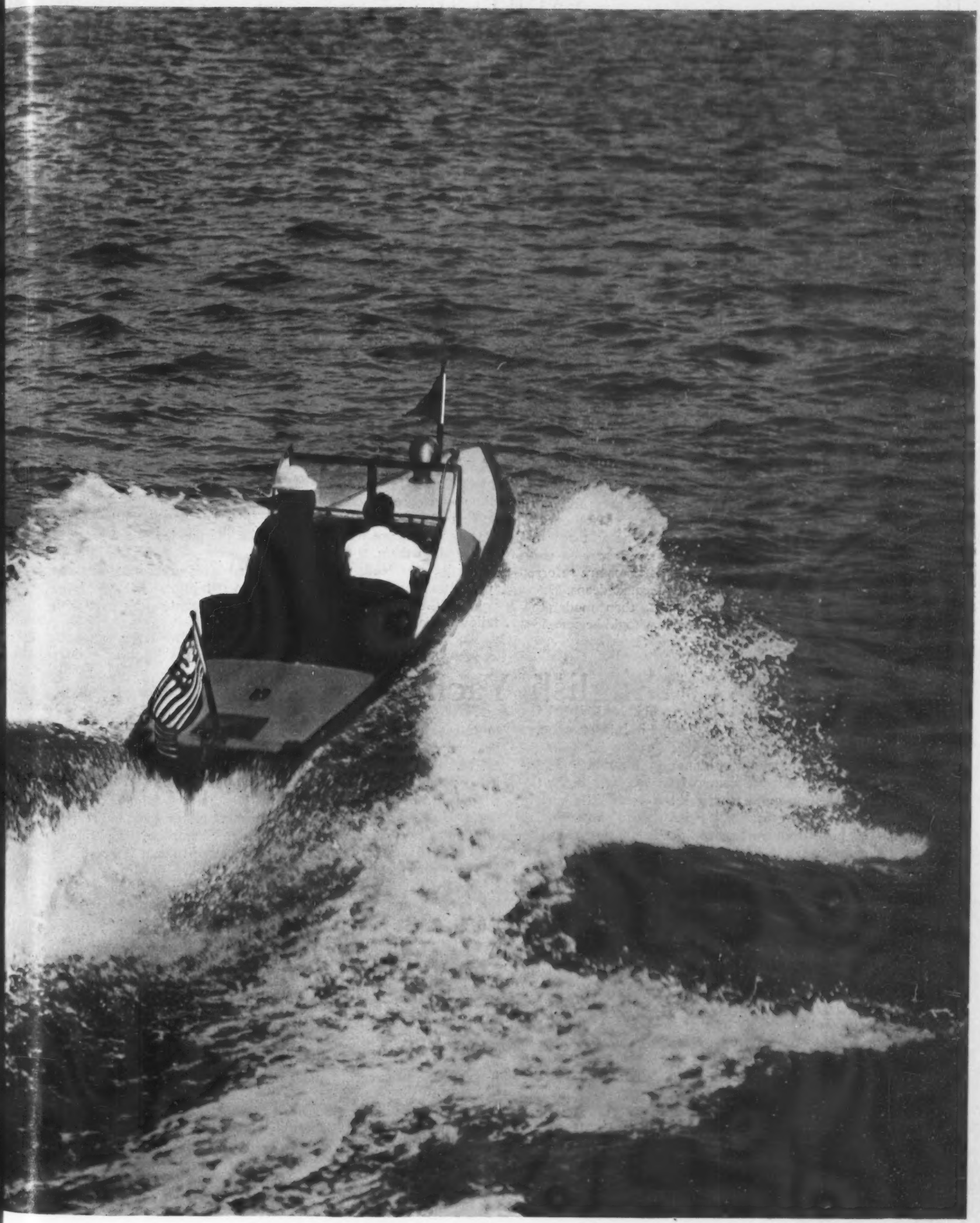
Printed in various places on the unimportant parts of the chart are important notes concerning the sailing directions, buoys, lighthouses, dangers, tides and currents.

Turning to the chart proper, we find, besides the grand divisions of land and water, all the waters of less depth than 18 feet are shaded; heavier degrees of shading indicating depths less than 12 feet, then less than 6 feet. Beyond these dotted areas the slope of the bottom is indicated by contour lines at 5, 10, 15, 20, 30, 40, 50 and 100 fathoms. Beyond 100 fathoms the soundings are infrequent. It is important to remember that these soundings are given for mean low water, which is the average of all the low waters for a lunar month, and at the low water of the spring tide at full and change of the moon, the sounding may be one-half foot less than shown on chart. For the sake of clearness, only sufficient soundings are shown to give the slope of the bottom.

Together with the soundings the characteristics of the bottom are given, both its composition and whether hard, soft or sticky.



OPENED UP—RUN[illegible]JR AT



JR AT FULL SPEED.

Coming in from Cape Henry in a fog, if a vessel began shoaling her water after passing the horseshoe, say, her master would have two indications to guide him as to whether he was north or south of the channel. If his soundings decreased suddenly, with hard bottom, he is probably north of his course, while to the south we find a more gradual slope, and sticky bottom.

You will find on the chart at various places, current stations giving the set and drift of the tidal currents at various stages of the tide, and by turning to the Coast Pilot for Chesapeake Bay, page 29, the time is given referring to the time of high water at Old Point of the beginning of the ebb and flood current.

The compass roses will be explained in connection with compasses. Turning our attention to the land divisions of the chart, we will find all details of topography that may be of assistance in navigation are delineated on the chart. The lower bay shores are flat and sandy and there are but few features of the topography that are of aid to navigation, but along the Maine coast, where the shores are hilly and the soundings abrupt, the shore topography becomes of great importance.

There are two systems in use for depicting elevations on charts, hachures or shadings, and contour lines.

Lead Line.

The most simple yet most useful aid to the navigator is the lead line, a plaited rope marked off in fathoms, and weighted with a 7 to 14 lb. lead. Only certain fathoms are marked, the marks being as follows:—One fathom—1 strip of leather; two fathoms—2 strips of leather; three fathoms—3 strips of leather; five fathoms—a white rag; seven fathoms—a red rag; ten fathoms—a leather with a hole in it; thirteen fathoms—same as three; fifteen—same as five; seventeen—same as seven; twenty—a short piece of cod line with 2 knots in it. These fathoms are referred to as marks, the unmarked fathoms being termed deeps.

The lead line should be thoroughly wet, then moderately stretched before being marked, and the marks should be occasionally verified.

Deep-Sea or Dipsy Lead.

For greater depths than twenty fathoms, the deep-sea lead, weighing from 30 to 100 lbs., is used. This line is marked every five fathoms as follows: Twenty fathoms—a short piece of cod line with 2 knots in it; twenty-five fathoms—same with 1 knot; thirty fathoms—same with 3 knots; thirty-five fathoms—1 knot; forty fathoms—4 knots, etc.

Sounding Rods.

Nowadays one rarely sees the dipsy lead, as in order to use it, it is necessary to check the ship's way. Instead, sounding rods are used, which are based upon the principle that the pressure varies directly as the depth of water. The sounding machine consists of a stand and reel with a coil of about 300 fathoms of heavy wire, fitted with a brake and cranks for reeling in. At the end of the wire is a long lead weighing about 60 lbs., and secured just above the lead is a cylindrical case containing a slender glass tube open at the lower end only. The inner surface of this glass tube is coated with a chemical substance (chromate of silver) that is discolored by the action of the sea water.

As the lead and tube descend, the water enters the lower part of the tube, compressing the air and discoloring the tube to a height corresponding to the depth reached. When the lead is let go the wire is allowed to run freely, until its sudden slackening shows bottom has been reached, when the brake is thrown on, cranks shipped, and wire reeled in. The glass tube is taken out, applied to a scale and the depth read off at the height of the discolored part.

There are other varieties of sounding rods in which other kinds of glass tubes are used, but the principle applied is the same in nearly all of them.

All deep-sea leads and sounding-rod leads are countersunk at the bottom, and when it is desired to obtain a specimen of the bottom, the lead is armed by filling this countersunk part with tallow or soap.

(To be continued.)

English Yachting

London, July 17, 1909.

THE British yacht-racing season, which has so far been unusually interesting, is now culminating in the historic fixture associated with the name of Cowes. At its best—which is to say when Queen Victoria reigned—this little port in the Isle of Wight was no great shakes either as to scenery or as a sea-side resort; but although I am writing some time ahead of the event, I can safely say, I think, that it is, at the moment, the centre of our world of fashion. The King and Queen, the Prince and Princess of Wales, and a host of second-eleven royalties are there, surrounded by nobility and gentry in whose veins the bluest of blue blood courses. The average American is not, I know, interested in our aristocrats; but the matter is worth mentioning, nevertheless, seeing that some of your own plutocrats are now not only in the class but of it. I am not going to say that this gravitation of blue blood to the Isle of Wight is due to yachting, and I am not going to say that it is not. If I had an idea on the subject worth backing, it would probably be that the influx is due to the visit of the Czar and Czarina. The Czar has two good steam yachts—the Copenhagen-built Standardt and the Petersburg-built Polarnaia Sviezda—but, owing probably to circumstances over which he has no control, His Majesty has not ventured into sail. Still, he is not too old to begin the game now; and if Cowes has the same effect on him as it had on the Kaiser and Alfonso of Spain, the inconvenient crowding of the Roads will be amply compensated. Even if the crowd inside the Wight breaks all records, however, the yachting will be worthy of it. The big cutters are more evenly matched than it was thought possible they could be earlier in the year; there is a full muster of the 15-metre boats for the first time this season, and the smaller international classes are in execellent trim.

The alterations made on White Heather have improved her slightly in light weather, without detriment to her speed in breezes. On one or two occasions she has beaten Shamrock surprisingly; but the fact remains that where the newer Fife boat is good, she is very, very good. In fact, I do not believe that in going to windward in a jackyard topsail breeze and smooth water there has ever been anything faster than Shamrock. As these are conditions frequently met with in British racing, I conclude that the end of the season will see Shamrock's superiority expressed in as many prizes as she won last year. It is in White Heather's favor this month, of course, that she is sailing in waters which Bevis knows by heart. But with a good pilot, there is no reason why Sycamore should not reduce that advantage to a minimum.

The honors in the 15-metre class, so far, lie with the new Mylne boat, Ostara, which has been handled marvelously well by her owner, Mr. Burton. The new Fife boat, Vanity, is not greatly inferior on the records, and her triumvirate of owners are not less skillful sailors than Mr. Burton. But from moderately close observation I assume the truth to be that Ostara is just the essential little bit better. The older boats, Ma'oona and Mariska, do well, but not well enough; which is not at all to be wondered at, considering the greater experience designers have had with

(Continued on page 158.)

Gasolene—Some Things It Will and Will Not Do

By HOWARD GREENE

JUST about this time of the year the average daily newspaper reporter with a butter-colored stratum in his professional make-up awakes with a start to the fact that the motor-boating season is once more in our midst and that it behooves him to cast about for some pretext, however wobbly as to its foundation in fact, that will justify him in writing up a "good hot story" about a gasolene launch explosion. The first thing we know he gets into print with a stickful about as follows:

"While the trim and taut naphtha yacht Peanut, owned by the well-known broker, Mr. C. Q. Dippy, was passing under the new Williamsburg Bridge yesterday afternoon the owner, who was at the helm, inadvertently flicked the ashes from his cigarette into the gasolene tank, which instantly exploded with a loud roar and a blinding flash of flame, blowing the bottom out of the vessel and setting the hull on fire. Mr. Dippy was hurled in the air by the terrific force of the detonation, but fortunately landed on the roadway of the bridge, practically unhurt. The yacht was totally destroyed. The plucky skipper declared—" etc., etc.

Ridiculous, is it? Not a particle more so than scores of the stories of so-called gasolene-tank explosions that will be written, printed and very generally swallowed this summer, regardless of facts and regardless even of the bounds of possibility. While it is not at all surprising that the lay public, believing almost anything that is printed as long as it does not know much about it, should credit such tales, it might with reason be expected that those who own and operate gasolene motors in power boats or automobiles should know pretty well what results would follow given combinations of circumstances, conditions and gasolene. But it's a solemn fact that a very great army of them know nothing at all about it, and every time one of these fellows goes forth in his boat or machine he secretly pats himself on the back and congratulates himself on being a pretty nervy sort of chap to go round juggling with a tankful of deadly explosive.

Now, that sort of thing is all bosh. It is a downright fact that you can't, to save your life, make gasolene explode unless you first vaporize it, then mix it with the correct proportion of air and, finally, ignite the mixture with something a good deal hotter than the bright end of a smoke. Anyone who has spent half an hour cranking a refractory engine without getting a reply *because the mixture was not right* ought to know this—and so should the fellow whose engine has consistently and persistently refused to start because the "fat, hot spark" could not ignite the liquid gasolene carried into the cylinder by way of a too generously opened needle-valve. Yet many of these very men read about "explosions" and shake their heads sadly. Nay, worse than this. Some of them even write these reports—but it's too horrible to contemplate.

You can stick your lighted cigar right into a tank of gasolene without disturbing the equanimity of that useful liquid. Then, there is that old trick of soaking a cigar with gasolene and smoking it fiercely, gasolene and all. The gasolene will vaporize, fraternize with the smoke and perhaps make you a little dizzy, but as for exploding or even igniting—nothing doing.

You can build a fire under a tank of gasolene and boil it all away as if it were so much water, and as long as there is an opening for the vapor to escape through nothing will happen, unless the vapor happens to catch fire, when it will burn at the hole like any other gas—without exploding. Of course, if the opening is stopped up you will have all the conditions necessary for a dandy little boiler explosion, and when the pressure gets sufficiently high the tank will burst, all right; but exactly the same thing would happen with water or kerosene or beer in the tank.

But are there not any conditions under which gasolene is dangerous or explosive or anything that it shouldn't be? Certainly there are. But before we get on the other side of the fence, just engrave on the tablets of your memory the fact that liquid gasolene, in a tank or can or barrel, cannot explode, with or without a startling detonation or a loud roar. It can't even burn until it is vaporized, and not then without the assistance of a very large proportion of air. It is well known to those who take the trouble to investigate that power boats or automobiles that have been on fire are frequently found to have their fuel tanks intact and containing gasolene, if the heat has not been sufficient to boil it away, or to melt out the solder from the seams and so let it leak out. A New York newspaper once printed a large and excellent picture of an automobile that had caught fire and burned up, so far as the body was concerned, and beneath the photograph the text explained that the fire had been started by the explosion of the gasolene tank, which let go with a report that shook the neighborhood and lifted the machine clear off the ground. And, in the face of all this, the most prominent thing in the picture was that very gasolene tank, smooth and whole—uninjured. Finally, after everything had cooled off the tank was still half full of this fearful explosive.

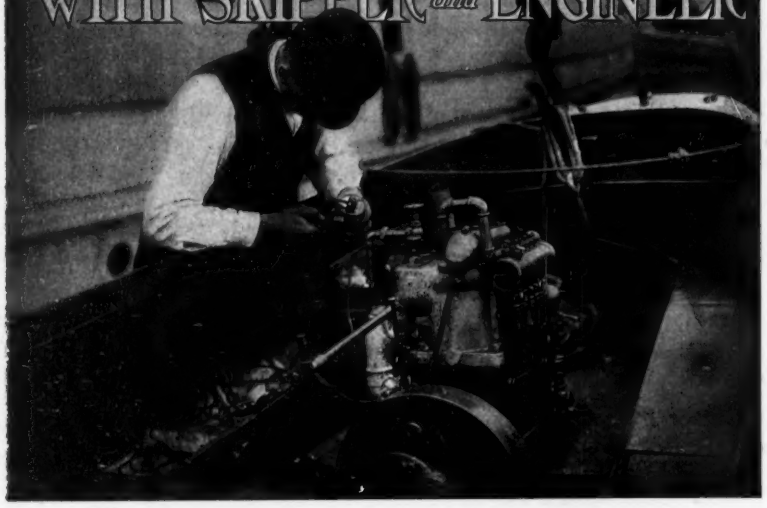
There are two characteristics of gasolene that really do make it dangerous under certain conditions. One is that the liquid is very readily vaporized, and the other that the vapor is heavier than air. Consequently, if gasolene is allowed to leak or slop into the bottom of a boat it will float on top of the bilge-water and vaporize, and the vapor will hang around, down low, for quite a long time before it is dislodged by air currents, and mixes with the air. Naturally, some of the vapor, high up, will be so diluted with air that it cannot be ignited, but somewhere down lower there will be a place where the proportions will be just right, and a carelessly dropped *lighted* match, or a lantern, or any sort of a naked flame will do the rest—which may be anything from a hot little "Puff!" to an explosion that will blow the cabin into the middle of next winter. But this is a very different matter from a tank explosion, and can be guarded against. The most obvious and important precaution is to have the entire gasolene system, from tank-filling cap to carburetor, the best that money can buy, with all the joints thoroughly well made and everything tight and free from the slightest leakage. Even the drippings of the carburetor, if inclined to be excessive, should be intercepted and kept out of the bottom of the boat. In the second place, don't permit anything in the shape of a naked flame down low in the boat. Of course, a man must sometimes smoke; but he does not have to throw matches into the bottom of the boat. A little electric lamp is the proper thing to use for engine exploration, for it cannot set fire to anything. A lantern or a candle can.

If, notwithstanding all this excellent advice, you manage to get gasolene blazing in your boat, don't waste time trying to put it out with water, for the stuff floats and burns away merrily. Throw on sand, or mud, or earth, if it can be had, or blankets, or your blue serge coat—anything that will smother the blaze and choke off the supply of air, without which combustion is impossible. It may be mentioned in passing that alcohol is of the same specific gravity as water and mixes readily with it; thus water thrown on blazing alcohol dilutes it and, when enough has been used, chokes out the fire. But this will not work with gasolene or kerosene.

Of course, a cabin boat with a leaky gasolene system runs a much better chance of being blown to smithereens than an open

boat, because in the latter the wind has a chance to keep the vapors cleared out, while the cabin makes an almost ideal collector, or gas receiver. It is always wise to take a cautious sniff around after a cabin has been closed for a while, and see—or, rather, smell—if any gasolene odor can be detected. If you feel suspicious, open up everything and wave a blanket or something violently around, so as to chase lurking gas out of nooks and corners into the open, where the draught can whisk it away. And then get busy and find out where the leak is, or, if there is no leak, where the gasolene came from.

To sum up, gasolene, properly and securely tanked and piped and not slopped around, is just about as dangerous as milk. Allowed to leak or spill into the bottom of the boat, it is more dangerous than gunpowder, for you cannot see the vapor. Money spent on the very best tanking, piping and connections is money well used. Money saved by the use of tin-can tanks and flimsy piping joints is the worst sort of economy. With no gasolene loose in your boat and no flame to ignite it (if there were any), it is pretty clear that the literary gentlemen who helped us to open this story will have to look elsewhere for material for his season's grist of nautical horrors.



Concerning Grease Cups and Lubricating Accessories

THE ordinary, plain, screw-capped grease cup for lubrication of engine bearings has only one recommendation—cheapness—and while this may endear it to the engine builder, it certainly does not appeal to the purchaser. It is mean to fill, and a hasty glance will not tell how far it is screwed down—as a matter of fact, about the only way of ascertaining quickly how much grease remains in the cup is to place the tips of your fingers underneath and find out how far down the sides of the cup have been screwed—a job the reverse of pleasant, when cleanliness is considered.

The grease cup with a screw top set down with a T head is not only easier to fill, but a glance at it in the daytime or at night, or just a feel of the length of stem protruding, will tell the engineer how much grease he has in his cup. Being permanently affixed to the engine, it is more easily filled, and it is possible to get more grease into it without waste than with a plain screw cap.

The easiest and cleanest way to fill a grease cup is by means of one of the wooden, spoon-shaped scoops, that can be found in any house-furnishing store. With the handle sufficiently shortened, this spoon can be carried in the lubricant belt, just where it is wanted when needed and out of the way when not in service.

When one is running a motor boat for the fun there is in it, and while lubricants keep up at their present prices, there is neither comfort nor economy in wasting lubricant on one's hands and clothes which could be applied with better results to the engine. The grease gun for packing the reverse gear, and the oil gun for filling the oil cups when the boat is in motion, will pay a dividend which starts with the first day's use.

Speaking of oil guns, it is a pity that the manufacturers do not make them with a stem long enough to reach to the bottom of the gallon oil can, and thereby avoid the necessity of tilting the can on one side as it becomes empty. Why manufacturers of gas engine oils do not supply their cans with the real tube spout is something that has puzzled every motor-boat owner. With a real tube spout, an oil cup can be filled even when the engine is running. With a lip this is an impossibility, if one wants to make a clean job of it. Some oil manufacturers, it is true, do supply the proper kind of spout on their oil cans, and it is probable that many cans of these oils are sold annually just through the convenience of the packing, everything else being equal.

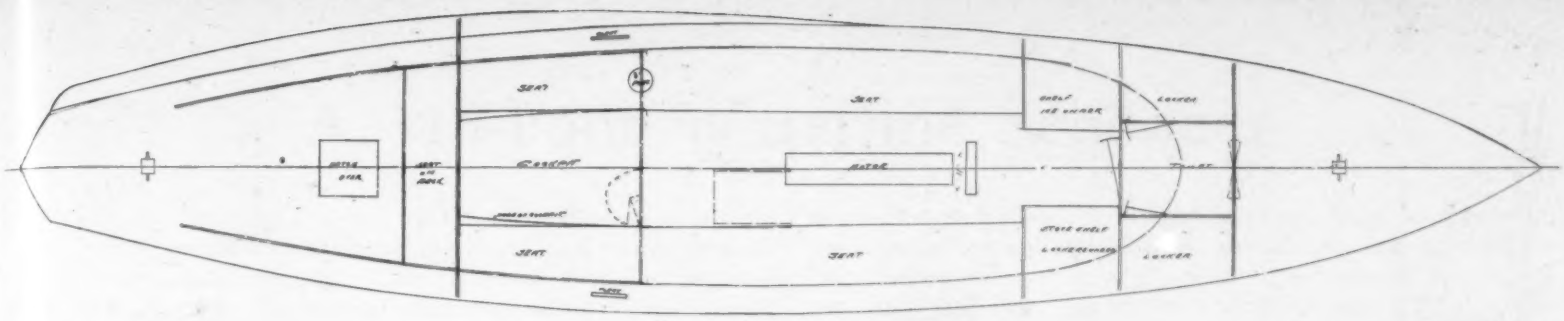
There is another bit of economy on the part of accessory manufacturers that causes much inconvenience. This is the shortness of the lever in some reverse gears. In many instances, on otherwise well-built and well-designed reverse gears, the lever is so short that when set loose enough to be handled easily by the engineer the gear itself will slip at times; and when tightened up sufficiently to obviate the slipping, it is necessary to get right down behind that gear and jump with the engineer's whole weight against it.

Of course, this can be remedied by a piece of heavy piping slipped down over the reverse gear handle, but it makes an unfinished-looking job, and is something that the individual purchaser should not be obliged to supply himself.

Adjustment for Oils of Different Viscosity

Oil of different viscosity usually requires different adjustments of the oil cup, and while this is well recognized by the mechanic or expert, it is a condition that receives but little attention from the average motor-boat owner. For instance, the oiling device may have been adjusted at the factory for a medium grade of oil, one having moderate viscosity, so that the cylinder would be fed eight drops per minute. After the original supply has been exhausted, it is very likely that either a heavier-bodied oil, or one of lighter viscosity than that supplied when the device was adjusted, is used, and the results obtained are not at all uniform or conducive to efficiency. If a heavier lubricant is used, the cylinder would not receive enough, while, with one of less viscosity, there would be a surplus fed to the surfaces. A disadvantage of the sight-feed oiling device is the limited capacity, and the constant attention required is annoying, as the oil feed must be started when the engine was started and the supply interrupted when it was stopped. While some manufacturers make it impossible for the motorist to forget to turn the oil on and off by combining the ignition switch with the shut-off valve-operating mechanism, the gravity feed is generally being abandoned on later models for the systems more efficient and positive, even if slightly more expensive, of installation.

It must be remembered in adjusting the supply of oil that the various parts require different amounts. Thus, for the main bearings, either on the crankshaft or camshaft, the feed need not be more than three or four drops per minute. If the oil feed runs directly to the cylinders and splash is not considered as a means of lubrication, the feed to this point should be from five to eight drops per minute if the speeds are to be normal, and more if the engine is to be operated at its maximum number of revolutions for any extended period. If splash from oil in the case is depended upon entirely and there are no separate leads to the cylinders, the feed should be more liberal, some authorities claiming that 15 to 20 drops per minute are about right.

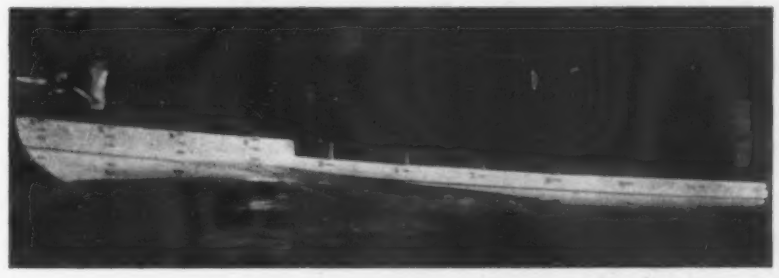


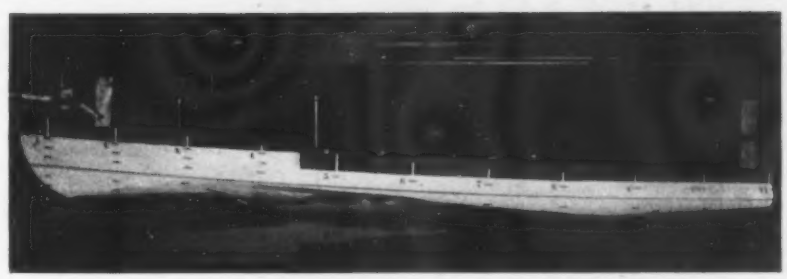
Fast Cruiser Kitcinque

AMONG the new small cruisers of the year is one called the Kitcinque, plans of which are shown herewith. This boat has many points of difference from the usual type of small cruiser. She has been designed for Mr. Frank D. Gheen, of New York, by Morris M. Whitaker, and is the second boat for the same owner designed by Mr. Whitaker.

In making the design, Mr. Whitaker aimed to produce a boat of much higher speed than has hitherto been thought possible on the dimensions chosen and which are required by the conditions of the Marblehead race, in which the boat will be entered. In previous years the boats that have competed in this event have averaged from nine to ten miles per hour over the course, but Mr. Gheen wanted a boat which would double this figure, and it was decided that before starting work on the hull a model of the boat should be tested in the experimental basin of the Navy Department at Washington.

These experiments were made in the early spring and showed that with the power chosen there should be no difficulty in reaching the desired speed in smooth water. Work on the hull was commenced in May, but, due to unforeseen delays, it has been impossible to get the boat in the water in time to include a report of her actual performance in this issue.





MODEL OF KITCINQUE IN THE GOVERNMENT TESTING TANK AT WASHINGTON, SHOWING WAVE FORM AND SETTLING OF HULL AT 15.8, 18.6 AND 17.1 MILES PER HOUR.

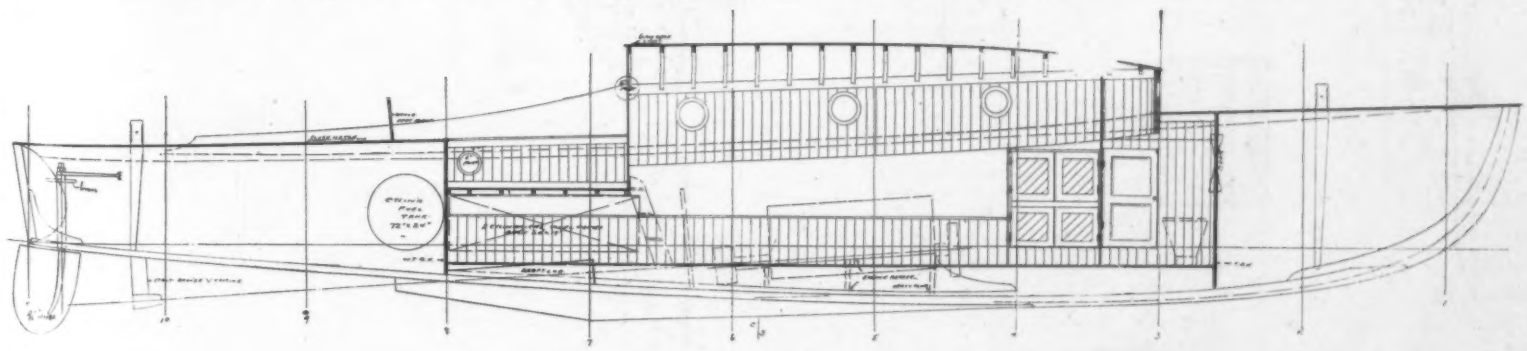
She is what may be termed a light cruiser, and in her construction a very strong and yet light hull has been worked out—one that has plenty of strength to stand knocking about, but which is about one-half the weight of the average boat of her dimensions. The plans show that the accommodations below deck give sleeping quarters for a crew of four, with cooking and toilet facilities. The cockpit is smaller than usual, but the size of this has been kept down on account of the possibility of encountering heavy weather, while the windjammer practice of using the deck for seats has been adopted. The after compartment is very large and may be used for sleeping accommodations for two more if desired.

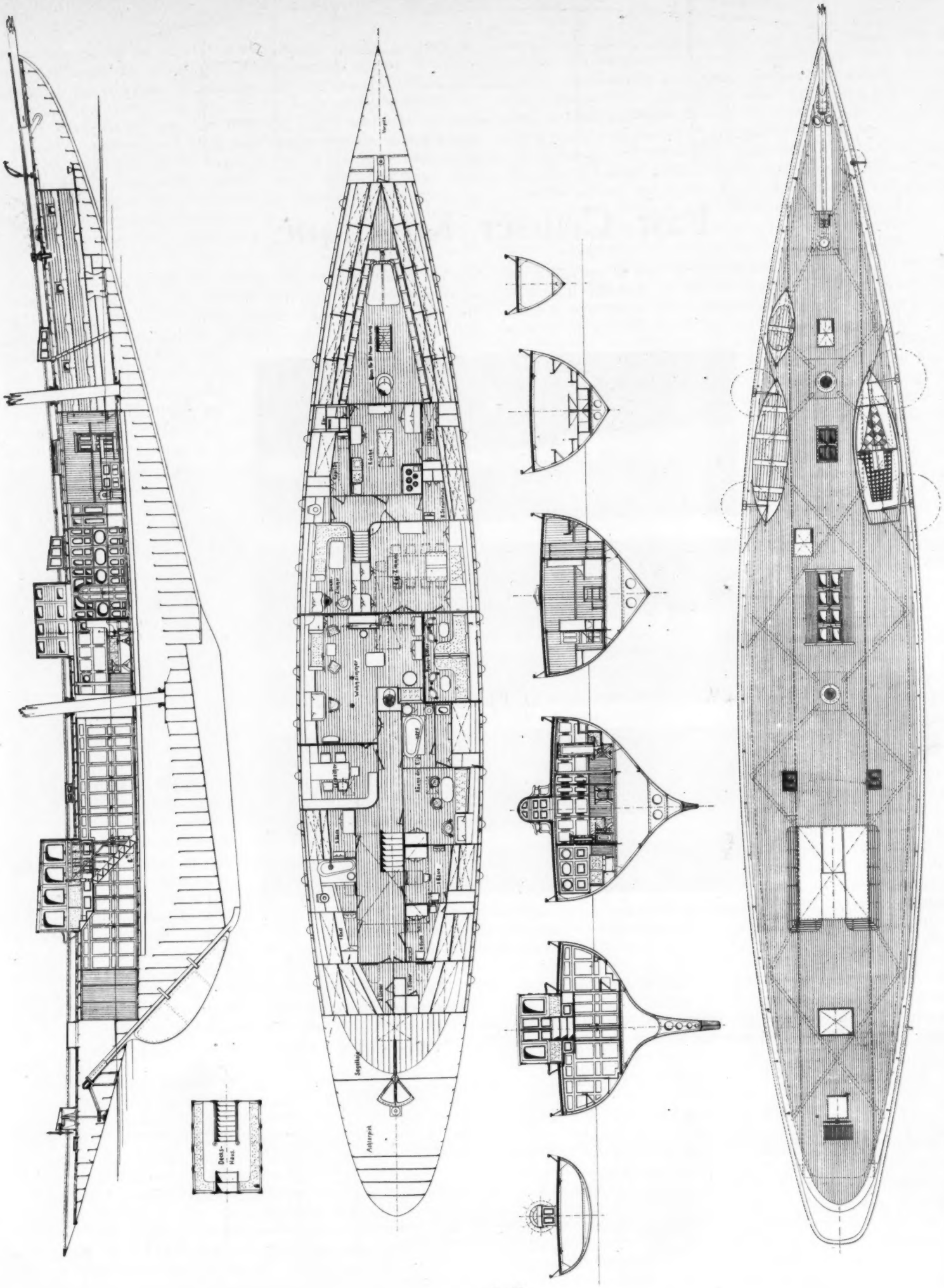
It will be noticed that there are no openings in the deck forward, and every detail making for seaworthiness has been looked out for.

Kitcinque will be fitted with electric lights and a special system of forced ventilation. Her fuel is to be carried in cylindrical, seamless steel tanks, holding 269 gallons in all, and will be piped to the motor through soft copper tubing run inside of the hull. The fresh-water supply is also carried in steel tanks holding 100 gallons.

The hull was built by Kraft & Fountain, of Long Island City, and the motor chosen is an eight-cylinder Sterling 5½ x 6 inches bore and stroke, fitted with high-tension distributor, coil and Bosch magneto.

The principal dimensions are: Length over all, 39 feet 9 inches; length waterline, 37 feet 6 inches; beam extreme, 8 feet 4 inches; beam waterline, 7 feet 7 inches; draft extreme, 30 inches.

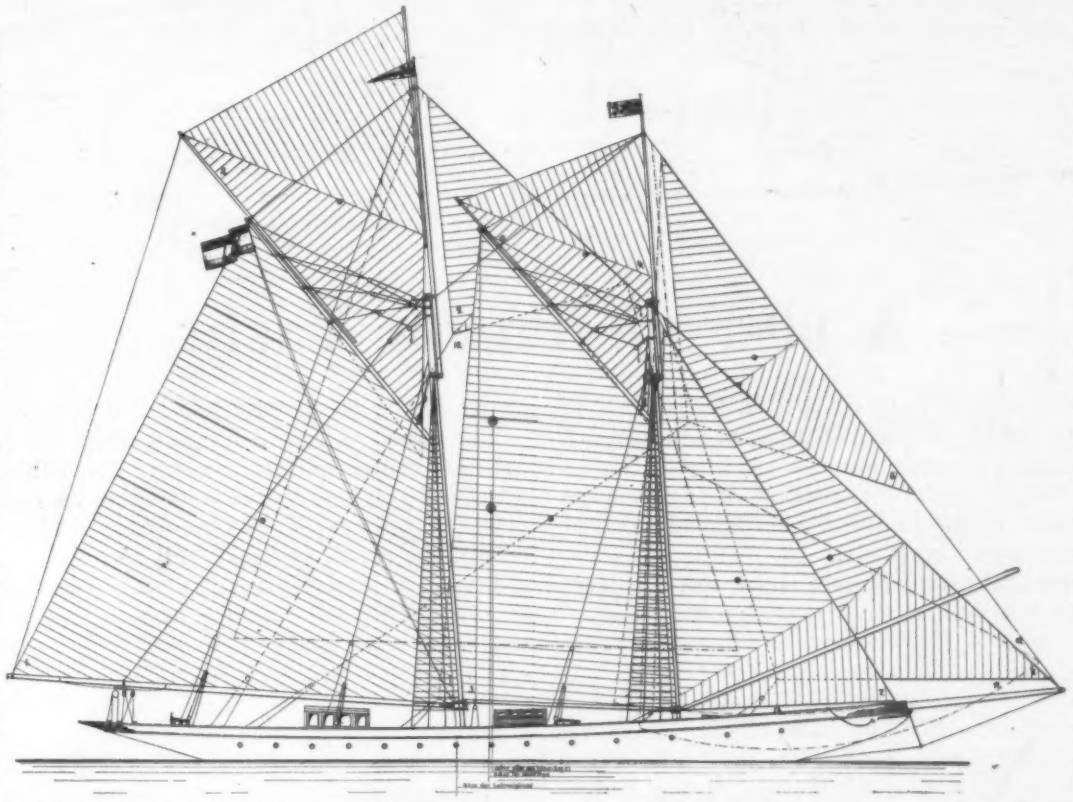




PLANS OF A 118-WATERLINE SCHOONER BY A GERMAN DESIGNER.

A 118-Foot Waterline Schooner

THE plans of the 118-foot water line schooner which we publish herewith are from the board of a young German naval architect, Mr. Oskar Gummel, who has recently come to this country. In size and general appearance the schooner resembles closely the successful Oertz schooner Germania, which came out last year and caused the eyes of the yachting world to turn towards Germany.

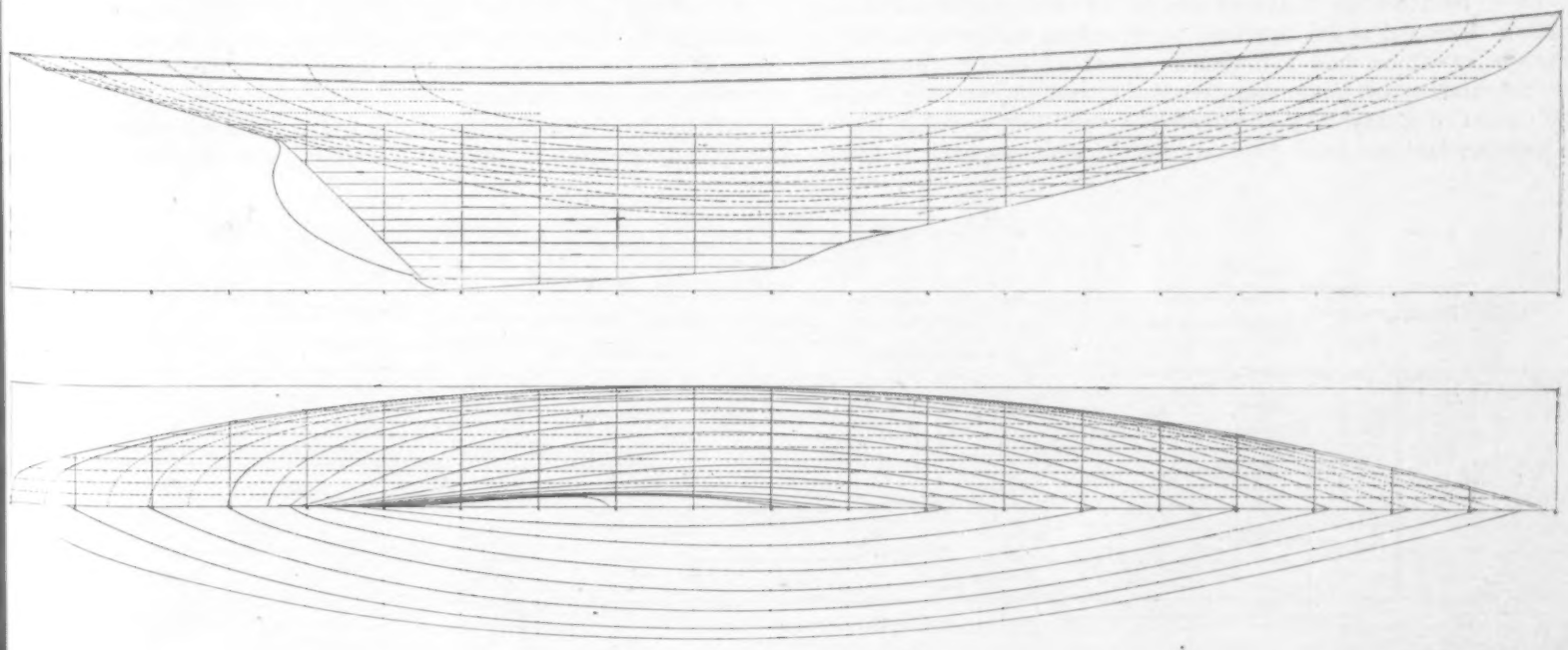


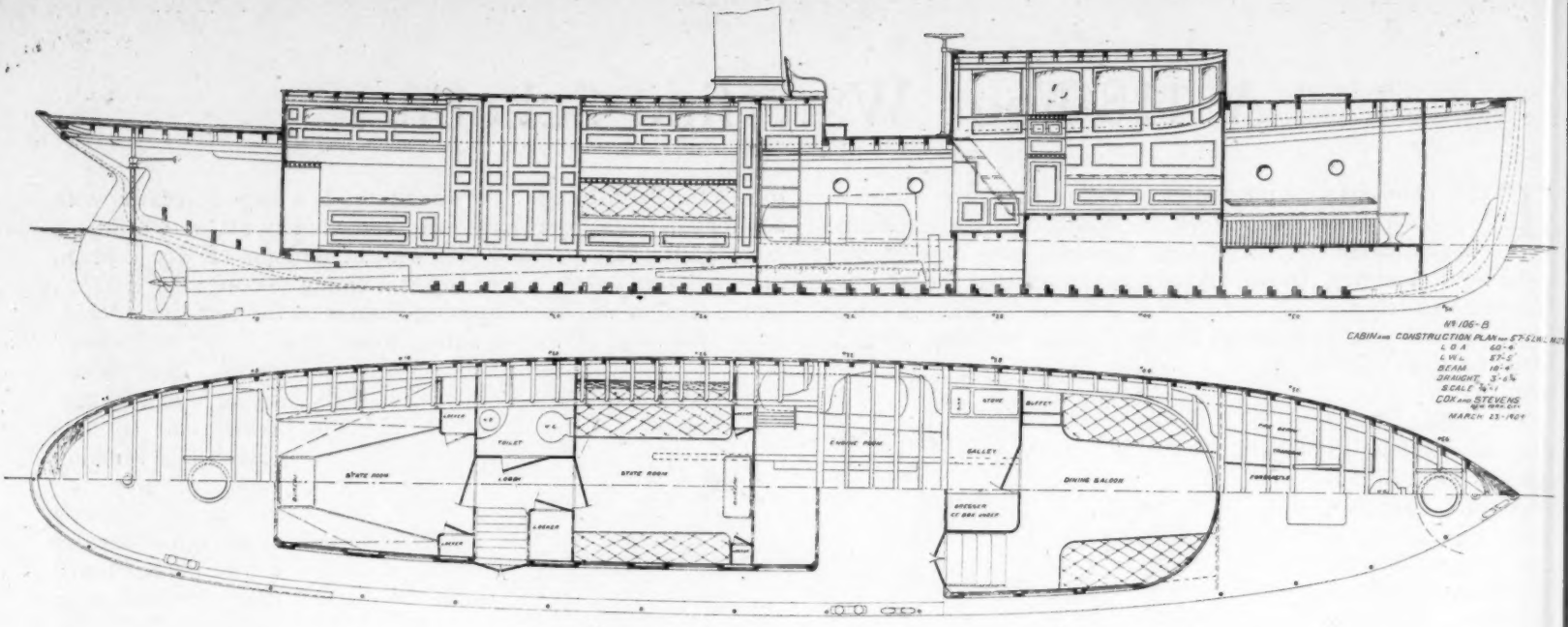
The plans under discussion show a marked Oertz influence, and took first place this spring at the college of naval architecture at Kiel, Germany. The general dimensions of the yacht are: length overall, 164′ 10″; length water line, 118′ 4″; beam, extreme. 25′ 7″; beam at water line, 24′ 1″; draught, 14′ 5″; displacement, 295 English tons. The measurement of the yacht was calculated according to the International Measurement Rule.

The specifications call for a very thorough construction, the plating and all frames being of special nickel steel from Krupp's Iron Works, Essen, Germany, as are also the deck stringers, side stringers, floors, diagonals, etc. All the other bindings are of the best angle steel. The deck is of white pine 2¾″ thick, while the floors of the 'tween decks are of fir wood 1⅝″ thick. The interior is finished in various kinds of wood to suit the furnishings. Forward there is a large forecastle with accommodations for twenty men, immediately aft of which is a large galley, 11′ 10″ x 9′ 7″, with staterooms off for captain, mate and stewards. Aft of this is a dining saloon, 12½′ x 14½′, with a small ladies' room opening from it on the port side. Amidships is a large saloon or sitting room, 17½′ x 17′, with piano, desks and bookcases. On the starboard side of this saloon is a smoking room, 11′ x 7′ 3″. A large owner's stateroom is further aft on the starboard side, with bath room opening off of it, the dimensions of the owner's quarters being 19′ 4″ x 11′. There are five other staterooms capable of accommodating seven guests, and a bath room. There is a large deck house, 11′ 10″ x 9′ 6″, which may also be used as a smoking room.

The total sail area is 15,000 square feet, divided as follows: Mainsail, 4,840; main topsail, 1,970; foresail, 2,785; fore topsail, 1,045; fore triangle, 4,360. To counterbalance this big sail spread there is a lead keel weighing 102 English tons.

A study of the plans and cross sections shows a boat of fine, easy lines, moderate overhangs, with a powerful underbody that should be able to do well in rough water and heavy winds.

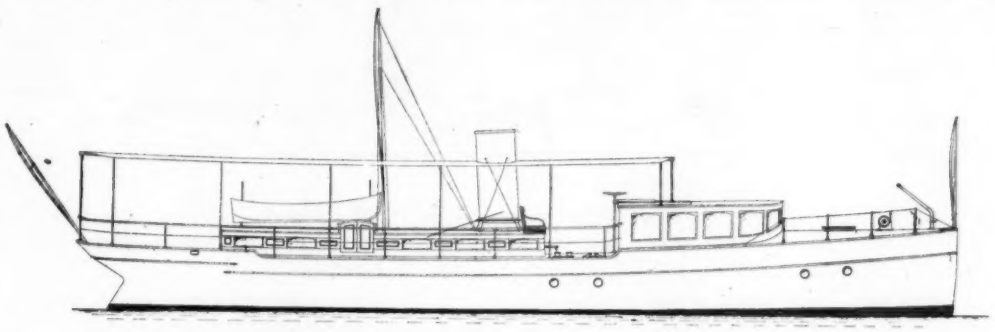




A 60-Foot Power Yacht

THE 60-foot power cruiser designed by Cox & Stevens, of New York City, for Mr. William Doughs, of Chicago, is a power boat which embodies many of the characteristics of a steam yacht. In fact, owing to the economy of engine space and the absence of bunker room, she has the accommodations of an 80 to 85-foot steam-powered craft.

She has a plumb stem and a round yacht stern with considerable overhang, which is so designed that it is all above the waterline, as will be seen by reference to the outboard profile. Under water her body shows a sort of compromise stern, which is a guarantee against her settling unduly when under way, and at the same time gives her increased after-deck room.

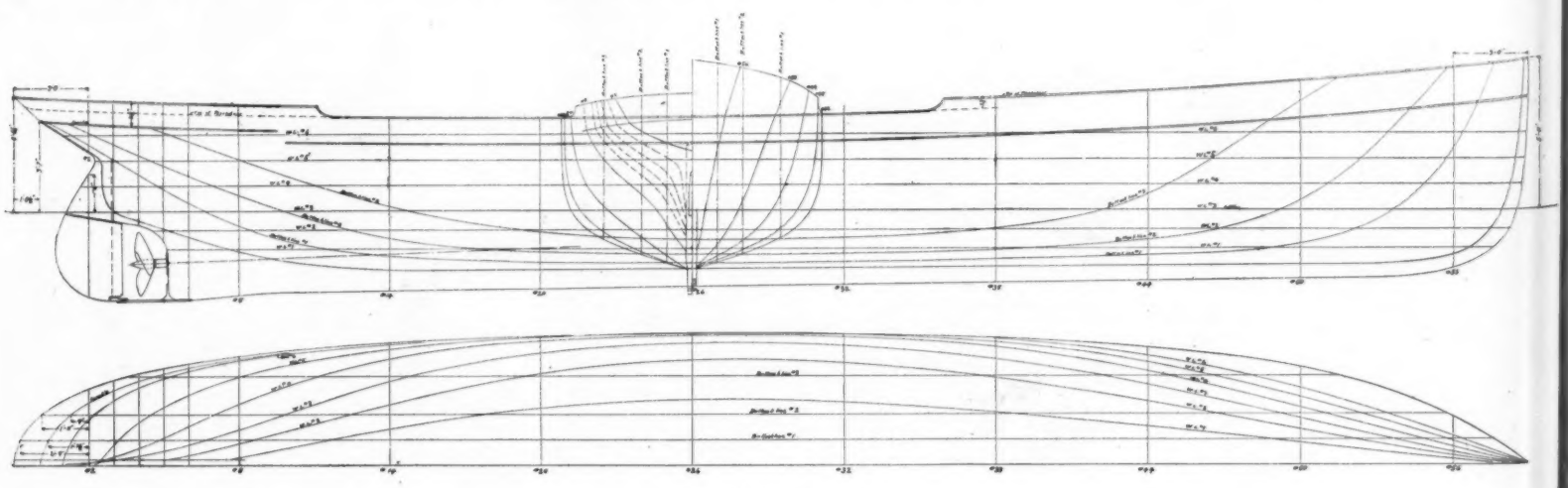


Her characteristic features consist of a commodious dining saloon forward under a raised trunk cabin, bridge deck aft of the dining saloon and a large after deck. The arrangement of the two staterooms under the after trunk, and the entrance thereto, by means of a starboard companionway and lobby, makes her an admirably laid-out craft for long cruises when a party of guests are to be made comfortable for a number of days at a time.

The crew are housed forward under the turtle deck, and their quarters contain all the necessary conveniences. These quarters are lighted by two 7-inch port lights on each side, and the forecastle contains two fixed transoms and two swinging pipe berths. Aft of the crew's quarters, and entirely separated from them by means of a watertight bulkhead, is the dining saloon, 8 feet in length, with side transoms and buffet. Aft of this, and connected by a swinging door, is the galley, with sink, stove space and a dresser, beneath which is the ice box. The entrance to the dining saloon is by means of a companionway at the starboard side of the after end of the deck-house.

Aft of the galley is the engine room, extending across the full width of the boat. In this is installed a 4-cylinder, 25-horsepower, 4-cycle Standard engine, which is figured to give her a speed of 11 miles per hour.

Aft of the engine room, and separated from it by a watertight bulkhead, are two staterooms extending the full width of the

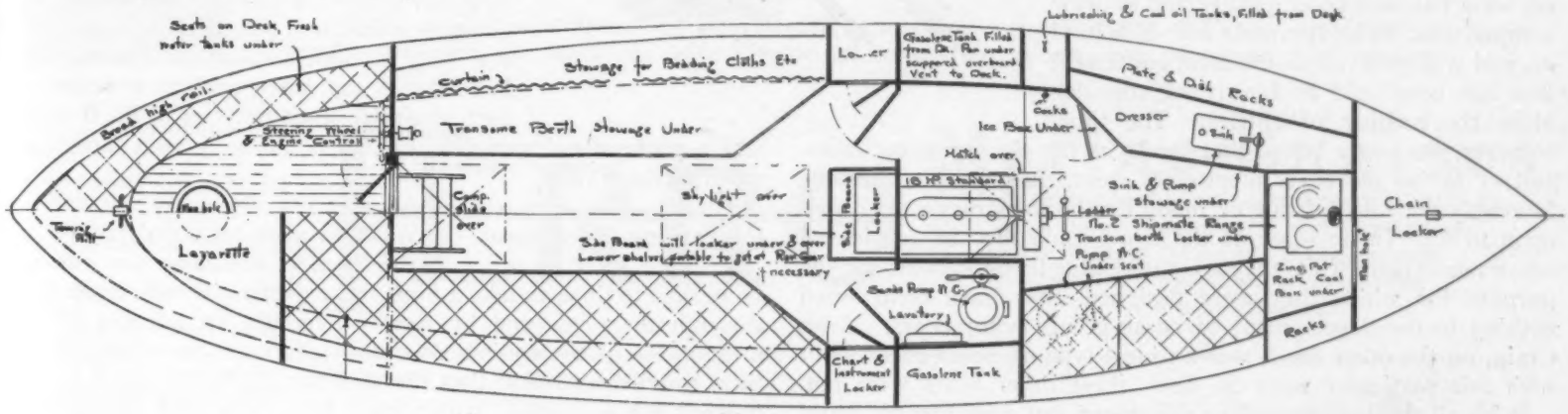


boat, and separated by a lobby and toilet. The forward stateroom is 7½ feet, and the after one 8 feet, in length. Each is fitted with a fixed berth on the port side and extension transoms on the starboard side, and each stateroom contains a good sized bureau and two clothes lockers. In addition to these, there is a large locker in the lobby, which is entered from the deck by a companionway on the starboard side.

Steering gear and engine controls are centered at the amidship bridge deck. At the after end of the bridge deck is a raised observation seat, which allows the occupants a view over the forward deck-house. The side decks are 16 inches wide, and protected by a heavy bulwark and guard rail, which latter serves as a support for the awning which extends from forward of the bridge deck to the extreme stern. Just before the after end of the after deck-house is reached, there is a rise in the bulwarks, which adds to the apparent height of her stern, and contributes greatly to the appearance of her sheer line.

She carries a dummy stack, which serves as an engine-room ventilator, and a signal mast. Her dimensions are as follows: Length over all, 60 feet 4 inches; load waterline, 57 feet 5 inches; extreme beam, 10 feet 4 inches, and draft, 3 feet 6¾ inches.

The gasolene tanks which are located in the engine room, one on each side, have a capacity of 75 gallons each, which gives her a cruising radius of 400 miles. There is tankage for 75 gallons of fresh water. She can be easily handled by a crew of two, consisting of captain and engineer.



A Forty-Foot Power Cruiser

THE accompanying plans are of a rather full-bodied cruising craft, well adapted to the man who, for the sake of comfort, is willing to sacrifice something in the way of speed. This boat was designed by the Bath Marine Construction Co., and is 40 feet over all, with 10 feet beam, and draws 40 inches of water.

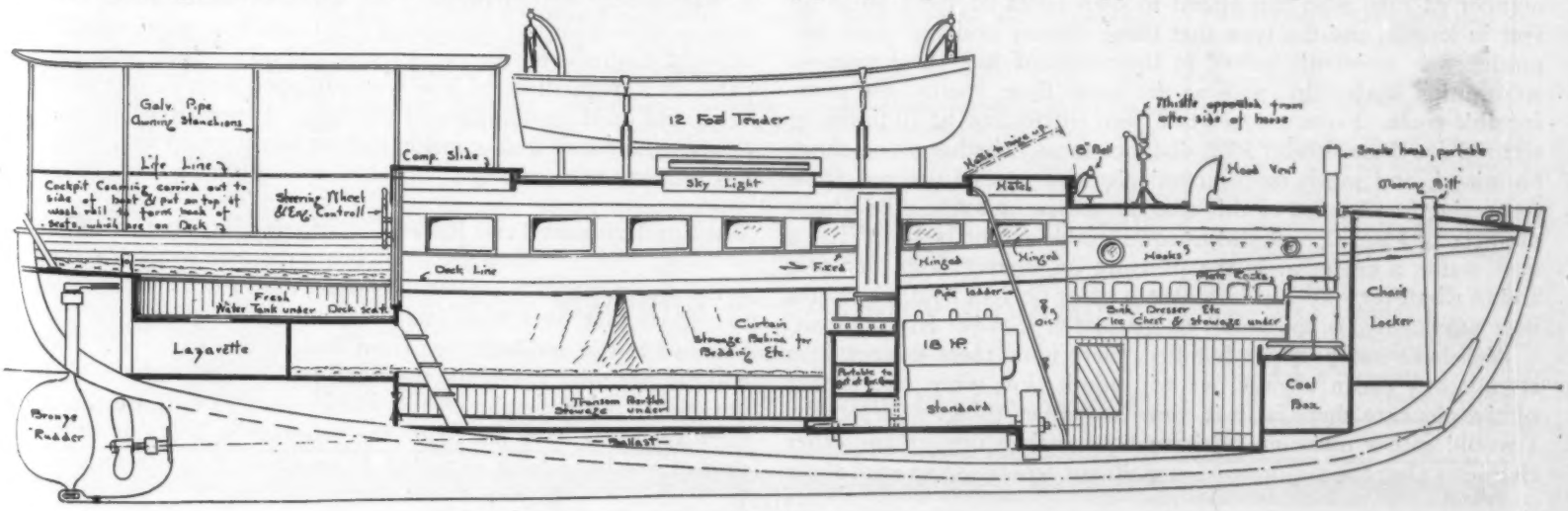
Her engine, an 18 H.-P., 3-cylinder Standard, is located well forward, and yet not so far as to cause her to plunge unduly in a seaway. The galley, with all conveniences, is located well in the bow. Just aft of the chain locker is the yacht stove, with a zinc pot rack and coal box underneath. Just aft of this is a transom berth, with lockers below it. On the port side are the plate and dish racks, with dresser, sink and ice box. There are also tanks for lubricating oil and kerosene on the port side, so arranged that they may be filled from deck. Aft of these oil tanks is the gasolene tank, with 300 gallons capacity, also arranged to fill from deck.

A door in the after engine-room bulkhead leads into the main cabin, at the forward end of which, on each side, are large lockers, one for clothing, the other for charts and instruments. On each side of the main cabin are transom berths, with stowage space underneath. At the forward end is a sideboard and locker, and over the center of the cabin is a skylight.

A companionway at the after end of the cabin leads to the cockpit. The cockpit coaming is carried out to the side of boat, with a wash rail on top to form backs for the seats, which are level with the deck. The fresh-water tanks, of 50 gallons capacity each, are underneath the cockpit seats.

The main cabin trunk is a continuation of the turtle deck over the engine room, and the ladder leads from the engine room and galley through a hinged hatch to the forward deck. This hatch is arranged to raise at the forward end, so as to force air down into the engine room when the boat is under way. A large manhole in the cockpit floor gives access to the lazarette.

The boat is very solidly constructed and ought to be a comfortable craft in any sort of weather. The ventilator over the engine room and the large oblong lights in the sides of the after cabin trunk, together with the skylights, should make her a very cool craft. She carries a 12-foot tender on davits and galvanized pipe awning stanchions support an awninig over the cockpit.



EDITORIAL

Published by the Yachting Publishing Co.: Oswald Garrison Villard, President; Herbert L. Stone, Secretary and Treasurer.

Motor Boat Racing. Now that the season is well under way, with a number of the important events already run or close at hand, it is well to see what has been accomplished and to draw comparisons. The Bermuda race is behind us, and will go down as the most successful that has been held so far, if we consider alone the number of entries. The time, however, was way below that made in the two previous races, and as far as the boats themselves went, they did not compare favorably with Ailsa Craig or Idaho for the work they were called upon to do. In no sense of the word could they be considered ocean racers; and while they were undoubtedly good boats for the purpose for which they were designed, they have contributed nothing to the development of ocean-going motor boats. Ailsa Craig, on the other hand, was an ideal type of ocean racer, built with this particular work in view; these other boats were not.

With all the publicity given this event, but four owners could be scared up willing to enter their boats, and at that the crew aboard one of them have been unsparing in their criticism of the craft, her equipment, and the manner in which she was found. Nor did the ratings of the boats, as measured under the present rules, give those that were sailing them satisfaction, and their criticism is loud and outspoken. On the whole, these things are not conducive to the good will of those who sent their boats over the course.

When we compare the results of this race with some of the others that have been successfully run this year—the New York to Albany and return, the Michigan City and the Marblehead, we are forced to the conclusion that these shorter cruising races hold many more attractions for the average motor-boat sailor than the offshore events, with their discomforts and hardships to offset the possible glory. One of the causes of this undoubtedly lies in the fact that the Bermuda race must necessarily be a rich man's game (or a builder's), and the man that can afford to own a boat capable of going to the Islands is not keen to put up with the trials incident to such a race.

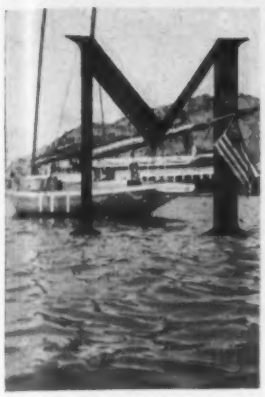
To my mind, the Marblehead race has done much more for the development of a sane, healthy type of cruising boat for our coastwise waters than the longer event has done. There are any number of men who can afford to own boats of from 30 to 40 feet in length, and the type that these shorter cruising races has produced is eminently suited to the needs of just these men—a substantial, seaworthy, and, at the same time, roomy and comfortable craft. From a dozen to fifteen entries can, at all times, be secured for these shorter long-distance races, whether along shore or inland, and much more actual pleasure can be derived from competing in an event of this character than on a 670-mile thresh offshore in a small, wet and uncomfortable motor boat. What a man wants a craft for is the pleasure he derives from her use, and in whatever way you look at it, a 50 or 60-foot boat, no matter how seaworthy, is too small to go to sea in with any comfort.

Well built and properly handled, there is no more danger than attends any ocean voyage, we will admit; but when one speaks of the pleasure there is in it, that is another thing. Personally, I would rather make an offshore voyage than one of any other character; but the majority of men do not feel the same way about it, and are they not entitled to enjoy, in the way they best like, the craft on which they spent their money? As to the seamanship that these offshore voyages engender, it is, of course, a most desirable thing, but barring navigation by nautical astronomy, the navigation that is required along shore calls for fully as much ability in piloting and handling as the other, and, as a matter of fact, desirable as it may be to do it yourself, a professional navigator has, so far, usually been carried on these offshore races.

Concerning Equipment. With the growing popularity of the power boat it has been the custom, from time to time, to take a fling at the owners of such craft, both through the press and by word of mouth, on account of the meagerness of the equipment usually carried. So persistent has been this denunciation that the government has stepped in and decreed the equipment which must be carried and let loose its inspectors on the trail of the lax motor-boat owner, to the end that at present, at least around commercial waterways, the majority of motor boats carry an adequate equipment in the way of lights, noise-making devices and life preservers.

In the hue and cry, however, the sailing man was somehow lost sight of, and he sat back and watched the baiting with a complacent smile in the position of the man in the glass house. Now, probably every cruising sailboat does carry a proper outfit to find her way from port to port with reasonable safety; but with the smaller open boats and raceabouts it is different. It was recently brought to our notice very forcibly that such boats are often criminally negligent in this respect. On a long-distance race of 100 miles, part of it out at sea, two of the boats started and sailed the course with no compass on board. Probably, if the truth had been known, lead lines were also missing, and possibly sailing lights. No excuse can be offered for this sort of thing, and it cannot be condemned too severely. Anyone who has sailed at all knows the danger incurred by failure to carry these things in night sailing and in a run of this length. In this particular case, the boats, had they won, would have been disqualified for failure to comply with the regulations of the race, which were explicit on this point. If it was done from a spirit of bravado, it was doubly reprehensible. An accident under these circumstances, outside of any damage or loss to craft or crew, would have brought discredit on the event itself, and all of those who participated in it, regardless of how well equipped their boats may have been, and on the promoters of the race. If persisted in, the government may well find occasion to turn its attention to a class that has hitherto been exempt.

The Sonderklasse Trial Races. In selecting the three German boats that are to meet our craft in the international Sonderklasse races, the Germans have selected two boats that were built last year, and one of this year's boats. The two last years' boats are from designs by Oertz—the Havella and the Seehund II—while the third is the Whittelsbach V, from designs by Englebrecht. This would seem to indicate that German designers have not made the progress in boats of this class that might have been expected from another year's experience.



R. E. M. DEPEW, of the U. S. Reclamation Service, Roosevelt, Arizona, writes:

"It would probably please you to know what the two-cylinder, 7 H. P. Ferro bought by the U. S. Reclamation Service has done, installed in a 20' launch, lashed on the side of a ferry boat 36' by 9'.

It has in the last five months made about 1,800 miles, carrying sometimes a load of 12,000 lbs. and has made about 2,700 trips of about three-quarters of a mile, carrying about 10,000 people and 4,000 horses and mules and their belongings. This without one nickel expenditure on the engine which, if possible, is running smoother and nicer to-day than it did when it first started."

This alone is a proof of Ferro efficiency for heavy duty. Ferro engines are now being successfully used in every type of boat—for work, for pleasure, for racing.

Ask the following Distributers for Information and a Demonstration.

Balfour Hardware Co., Savannah, Ga.
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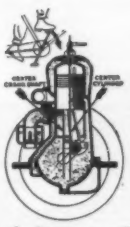
A. R. Williams Mach. Co., Ltd., Toronto
The Western Engine & Supply Co., Vancouver, B. C.

FERRO Marine Engines

Made in 1, 2 and 3 cylinders from 3 to 25 H. P.
Jump Spark Ignition. 1 and 2 cylinders, 4 to 15 H. P. Make and Break Ignition.
Just the engine for any boat for work or pleasure.

Attractive Prices—Best Quality.



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An improvement found in the highest priced automobile motors and Ferro engines.

Force of explosion exerts all turning force on Crankshaft. Gives greater power efficiency, reduces and equalizes side thrusts of piston on cylinder walls. Eliminates "knock" which loosens parts.

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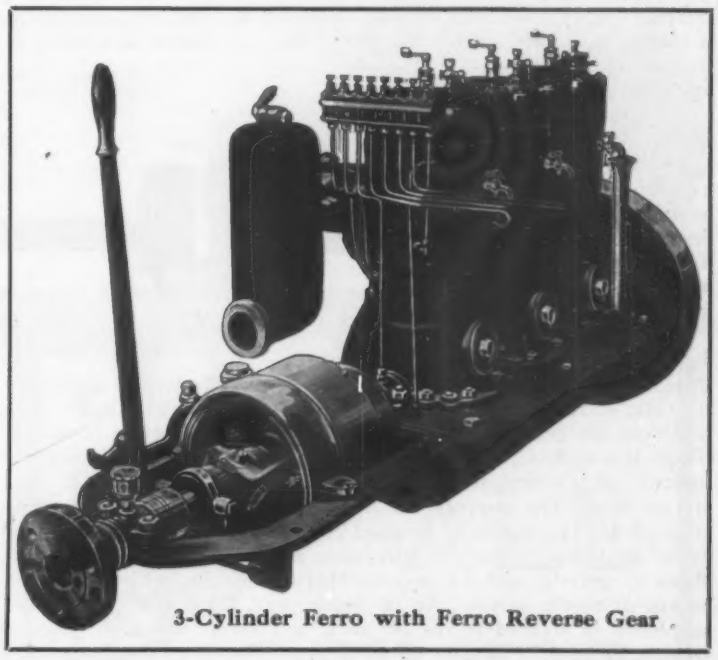
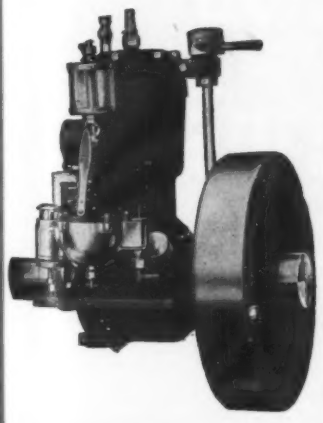
And others too lengthy to mention.



3-Cylinder Ferro with Ferro Reverse Gear

SPECIAL—5000 3 H. P. FERROS AT $60 EACH. Good as money can build. All improvements of standard Ferros, quantity brings down the price. Just the thing for launch, canoe, dinghy or auxiliary yacht.



Biggest Value in Reverse Gear on the Market. Ferro Gear gives positive control and a neutral point where engine runs free. Get a catalogue.

Free Catalogue describing all 1909 models upon request. Write for it.

A Practical Treatise covering design, construction, installation and operation of marine motors sold for half the cost—25 cents. 9 x 12 inches in size, 250 illustrations and diagrams, 72 pages. For the man who is not an expert mechanic. Full of helpful information which every boat owner should have.

Remember our New York Office, 44 Cortlandt St. (2d floor)
A large stock of engines. Experts in charge.

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Main Offices **808 Superior St., Cleveland, O.**

Leading Boat Builders use Ferro engines. They must be good. Ask any of the following:
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Outing Boat Co., - Ashland, Wis.
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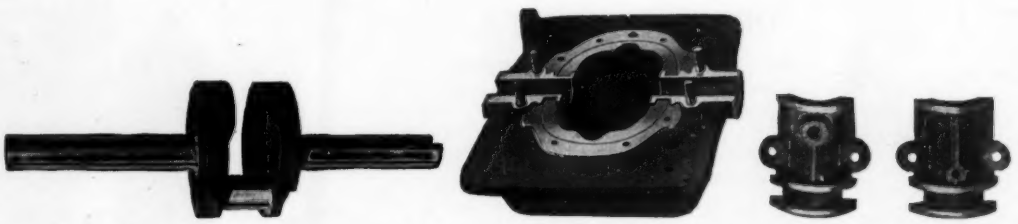
Niagara Motor Boat Co., N. Tonawanda, N. Y.
Pioneer Boat & Pattern Co., Bay City, Mich.
Packard Motor Yacht Co., Cincinnati
Monitor Boat & Engine Co., Newark, N. J.

Regarding Counterbalanced Crank Shafts, Split Bearings and Lubricating Methods Unpleasant engine vibration may be almost wholly overcome by attaching to the crank arms a mass whose weight bears a certain relation to that of the piston and connecting rod. In two-cycle motors this weight may be made in the form of a disc, and serve two purposes, as in the Ferro; namely, to decrease the cubical contents of the crank chamber, thereby allowing good compression as well as performing the function of counterweights, thus securing steady and smooth running and noticeable elimination of vibration. Ferro motors possess the counterbalanced crank shaft and all of its inherent qualities.

The split bearing in the Ferro is worth careful consideration, especially on engines from 4 horsepower upwards. On some of the larger sizes of two-cycle motors, when the bearing begins to wear, there is no method provided to compensate. On the regular Ferro motor the crank case, main bearing and cylinder part on a line through the center of the crank shaft, a feature that was recently specified by the government in sending out bids for a contract for two-cycle motors. Adjustment for wear of Ferro bearings is accomplished by simply removing a shim from under the main bearing cap. It is therefore unnecessary to use grease cups on the regular Ferro line.



Counterbalanced crankshaft, crank case with oil reservoir, and split bearings, as constructed for Ferro engine.

The Ferro lubricating system is unique in design, simple in construction and powerfully effective in operation. The oil tank, or reservoir, is cast integral with the crank case under the flange, and does not present an unsightly appearance; in fact, it is out of sight. There is a sight-feed distributor, secured to the head of the rear cylinder, and the oil is forced thereto by means of the pressure brought to bear on its surface. The pressure is taken from the crank case compression through a small, specially designed check valve, that prevents the pressure from returning. From the distributor are led oil pipes into which the oil flows by gravity, and the quantity that flows to each pipe is regulated by means of needle valves. An oil depth gage, filler tube and relief spindle combined is secured to the oil tank, and serves three purposes: First, of determining the amount of oil in the reservoir at any time; second, of filling the tank very conveniently; third, of relieving the pressure on the surface of the oil by simply unscrewing the relief spindle.

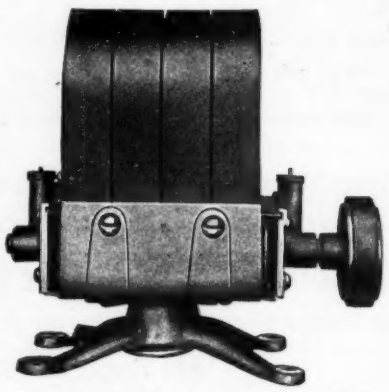
At the Alaska-Yukon-Pacific Exposition, which is already attracting large crowds to Seattle, and which in construction, beauty and exhibits bids fair to excel the statements of those who are responsible for it, the Ferro Machine & Foundry Company, of Cleveland, Ohio, is showing what is undoubtedly one of the largest and finest exhibits of marine engines, parts and accessories ever placed before the public. No motor boat owner or enthusiast can fail to be interested in this display, which is located in Machinery Hall, under the name of the Seattle Marine Supply Company, Puget Sound distributors for Ferro engines.

To insure the success of this expensive exhibit, the Ferro Company have sent their Western sales manager and engine expert, Mr. W. P. Street, who will be in charge until the close of the exposition. Mr. Street is one of the best posted authorities in the boat and engine business. His time and experience are at the disposal of those who desire information regarding marine motors, and power boat men will find this exhibit of practical value to them.

For Furnishing a Hot Spark The "Hotshot Igniter," made by the Igniter Appliance Company, of 302 Electric Building, Cleveland, Ohio, is a new bit of electrical equipment for the motor boat owner who uses the jump-spark system of ignition. The first glance at the machine impresses the beholder with the extreme simplicity of the design, its moderate size and weight. These latter features are made possible by the fact that every ounce of material and every bit of workmanship which goes into the machine is the best that money can buy and skilled labor produce.

The magnets are made of a special grade of magnet steel, capable of being highly charged and insuring permanency. The motor is of soft, laminated steel, turned absolutely true to size, perfectly balanced and without wire winding of any description. The coil is stationary in the pole pieces, and absolutely protected from outside influences. These pole pieces are especially designed, the coil recess so dividing each side that there are four current impulses instead of the usual two obtained from each revolution. The coil is so placed as to be protected from injury. Lubrication is by means of hard grease cups, guaranteeing against overflow. The bearings are of phosphor bronze, with liberal length of bearing on each shaft, which insures continued satisfactory service.

The current is alternating, with four current impulses from each revolution, and no changes of wiring or accessories are required when installing the "Hotshot Igniter," which revolves at a normal speed of 2,800 per minute, and is not affected either mechanically or electrically by changes in engine speed. In fact, the "Hotshot Igniter" will, on cranking the engine, produce sufficient spark to explode the charge. The drive is either by friction wheel, gears or belt—whichever may be desired. They can be run in either direction, and can be set at any angle. There are no governors, commutators or moving wires.



The Hot Shot Igniter, which furnishes alternating current for jump-spark ignition system.

Valentine's Valspar to the Front That the Valentine Valspar stands up under the most adverse conditions is demonstrated by the fact that Capt. Fred Mauerhoff, of the Heather, winner of the last Bermuda power boat race, and Capt. G. A. Hedborg, of the schooner yacht Margaret, winner of the last Bermuda sailing race, both declare that Valspar is the best yacht varnish that was ever used. Although both yachts were washed by heavy seas and constantly drenched by spray, and then subjected to the drying heat of the sun, the Valspar which was used on them was bright and fresh on their return.

It is such tests as these that show out the true quality of varnish, and Messrs. Valentine & Company are to be congratulated on the good showing which their product has certainly made.

A New Spark Plug and a Very Good Little-Trouble Lamp The Witherbee Igniter Company, manufacturers of the well-known Witherbee Storage Battery, is furnishing a line of things electrical for motor boat owners, which is being marketed under the trade name "Wico." A spark plug, a timer, a line of coils, switches, gage lamps and a trouble lamp, all bristle with up-to-date features, and mark a distinct advance in electro-mechanical design. The exceptional excellence of these productions reflects much credit on the concern which is putting

STANDARD OF RELIABILITY SIMPLICITY

"The Automatic"

This is the sort of engine—an engine that will take you all along the coast, from one country to another, or from one continent to another, if you wish. We are not just talking, the "AUTOMATIC" has done it for others; it will do the same for you. To boost our yacht type engines, we have made a special price reduction on 6, 12, 18, 24 h.p. They are built in sizes of one to six cylinders, 6 to 150 h.p. Primarily for long distance cruising, for the man who wants to spend either his summers or winters away from home, and not put in for repairs while away.

"From Seattle to Siberia and return, without mishap," a little booklet telling of one of many trips of an "AUTOMATIC" will interest you. We will gladly send it with other of our literature upon request.

AUTOMATIC MACHINE COMPANY
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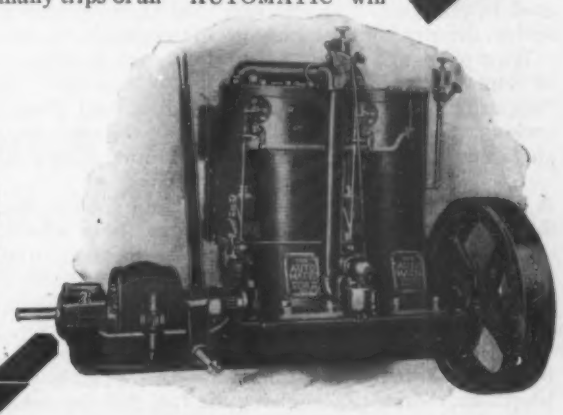

"The Automatic"

Automatic Machine Co., Railroad Ave. an Washington St., Seattle, Wash. (Mr. H. H. Lewis, Manager).
Automatic Machine Co., 1811 Market St., Galveston, Tex. (Mr. Jas. M. Parmelee)
P. P. Erueckbauer, Elkhart Lake, Wis.
Crescent Marine Motor Works, 116 Ferry St., St Louis, Mo.
J. W. Enright Iron Works, 862 Tchoupitoulas St., New Orleans, La.
Henshaw, Bulkley & Co., 19-21 Fremont St., San Francisco, Cal.
King & Runyan, Pensacola, Fla.
M. J. Moran, 4262 E. 96th St., Cleveland, O
Harrison M. Reed, So. Jacksonville, Fla.
Reierson Machinery Co., Portland, Ore.
Southern Gas Engine & Power Co., 25 Broad St., Charleston, S. C. (Chas. E. Witmack, Manager).
Chas. W. Triggs, 60 N. Canal St., Chicago, Ill.
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VALENTINES VARNISH "VALSPAR"

King of Spar Varnishes WILL NOT Turn White

ALL OTHER Spar Varnishes WILL Turn White

when exposed to the action of water

VALENTINE & CO.

277 Dearborn St., CHICAGO 257 Broadway, NEW YORK 74 Pearl St., BOSTON

them out, and bespeaks an extensive and well-merited sale for them.

The accompanying illustrations show two of the "Wico" products that have met with a great deal of success among the power-boating fraternity. The "Trouble Lamp" is an exceedingly compact little affair, with a neat brass wire cage, brass handle and a generous length of silk coil, all neatly boxed to occupy a small space. The lamp is of proper voltage to operate from a Witherbee ignition battery.

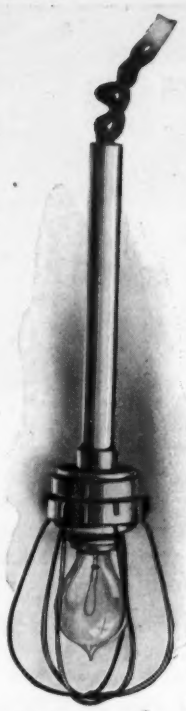
It may be connected up with a five or six-cell dry battery, and will not pull down the amperage unduly when used for a reasonable length of time.

It's just the thing with which to shed light on carburetor troubles and explore the condition of the gasolene tank in the darkest kind of a night.

The new Wico Spark Plug has proved its value for marine engine use. While new, to the extent that it was shown to the public for the first time at the automobile and motor boat shows last winter, it was successfully used during the previous year in all types of automobile engines.

The distinctive feature of the plug is an exclusive micrometer attachment, which permits quick and accurate adjustment to any required distance down to 1/1000 of an inch. All plugs used in the ignition system may thus be set exactly alike, assuring the rhythmic running of the engine.

Wico plugs are readily adjustable to any system of ignition or compression, for any make of coil or magneto. Moreover, they can be taken apart and cleaned without disturbing the packing. So confident are the makers in the efficiency of these plugs that they give a guarantee warranting each plug.

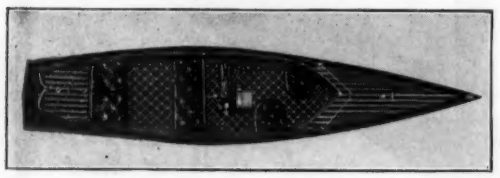


Wico Inspection Lamp, which gives a four-candle-power light and may be run on either storage or a five or six-cell dry battery.

A Roomy Small Launch A very attractive little power boat which will appeal not only to those whose pocketbook is limited, but to the man who, in addition to his larger cruiser, desires a small, easily-handled low-powered craft for hunting and fishing, is the Prince William, designed and built by the C. T. Wright Engine Company, of Greenville, Mich.

In designing the Prince William it was the aim of the Wright Company to obtain a boat with a maximum of cockpit space with a moderate over-all length and beam. Recognizing the fact that the available amount of cockpit room is governed by the floor space, Prince William was built on lines which allow for an extreme floor width of 42 inches on a beam of 42 inches.

She is 16 feet in length over all, 42 inches beam, with a cockpit of 9 feet in length, and will carry six to eight people comfortably. The seats are adjustable, and may be moved into various positions with very slight effort. Her 2½-horsepower engine exhausts through a water-jacketed port into a water-cooled expansion chamber, and from there passes to an exhaust condenser, where the condensation is so complete and the water spray mixture is so thorough that there remains but very little noise or odor. This exhaust device forms a double muffler, which, the builders claim, has, instead of any back pressure, a strong suction, which aids in clearing the expansion chamber, but retains the exhaust just long enough to do away with the noise and odor.



Deck view of Prince William model 16-foot launch.

The Prince William has 9/16-inch planking; the body is of red cypress, ribs and all framework of clear second-growth white oak. Bow and stern decks are of cherry or mahogany finish, or as specified by the customer. All hardwood, such as sheer strake, sheer planks, decks, coaming, etc., are finished in three coats of spar varnish and rubbed to furniture finish. All seams and nail indentures are payed perfectly smooth, with an elastic seam composition, and the outside of hull is painted with pure white lead and one coat of white marine enamel.

The boat is particularly adapted for use in shallow water; is perfectly steady for casting or shooting, and is almost noiseless. She is seaworthy and buoyant, with sufficient dead rise to insure perfect confidence. She is guaranteed to make 9 miles per hour, and her builders state that she can, at times, be driven at the rate of 10.

She is equipped with a weedless wheel and rudder, which enables her to navigate small lakes and weed-grown streams. The engine is placed low amidships, and the lines of her stern and the angle of the shaft are such as to reduce "squatting" to a minimum.

The price at which she is sold is so low that we are ashamed to mention it here, but her builders will give information regarding this upon request.

Wico Spark Plug, with micrometer adjustment for regulating length of spark.

A Life Preserver and Cushion Combined The Kenyon Life Preserver Pillow, which was placed on the market the first of the present year, has probably met with a heavier sale than any other article ever put out for the use of the person who gets out on the water in the summer season. Before the summer season in the Northern States had fully opened up thousands of these pillows had been sold.

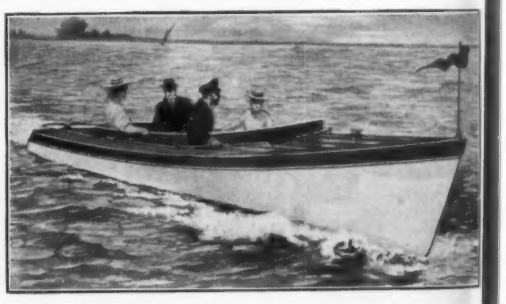
Distributing points in New York City, Philadelphia, Detroit, Chicago, Seattle, Los Angeles, Kansas City and numerous other places have been opened, and the Kenyon Company is now shipping several hundred life preserver pillows a week, with prospects of the business being doubled in the month of August.

These life preserver pillows are made up in very attractive shape, of high-grade materials, and guaranteed to support the heaviest person in water for days at a time. They are filled with a non-absorbent filling which has made the Kenyon famous.

These cushions have just received official recognition at the Alaska-Yukon Exposition, with the Board of Inspectors at Seattle having passed them in ten large electric boats, which are being used for transporting passengers to and from the exposition grounds.

It is expected that within a short time these life preservers will be recognized by all inspectors as satisfactory on passenger craft, and they are now guaranteed by the Kenyon Company to stand all tests as to weight and buoyancy. The price of these cushions is very reasonable, and the quality is the best, both as to material and workmanship.

A large number of boat builders are using these cushions in their regular equipment, among them being the W. H. Mullins Company, C. T. Wright Engine Company, Rochester Gas Engine Company and numerous other boat builders, whose reputation for the highest grade of work is known either locally or throughout the entire country.



The Prince William launch under way. With a 2½ hp. engine she made 9 miles.

The factories of the R. L. Kenyon Company are now working overtime, with every bit of help it is possible to procure, and are doing their best to keep up with the orders with which they have been favored this season.

The plans of the firm now call for the construction of an new absolutely fireproof factory, which will have a capacity of 5,000 Kenyon tops, for the season of 1910, and 500,000 square feet of cushions. It is planned to have this factory ready for occupancy by January 1, 1910.

An Unbreakable Oil Gun They are telling a good story about Caywood, of the Gleason-Peters Air Pump Company. Early one morning he floated into the emporium of an up-State dealer in marine hardware and found the proprietor too busy for conversation. There was a nice, bright oil gun lying on the counter; also a wire nail. Caywood picked up the nail, using the oil gun as a hammer, and proceeded to drive it into a packing case which was lying near him. At the first whack he put a dent in the oil gun. With the second he drove a hole in it and also attracted the attention of the proprietor, but before this irate gentleman could reach him, Caywood discovered another oil gun, and, discarding the first, which was now in a somewhat shop-worn condition, proceeded to finish his task—and also the second gun.

"What the mischief are you trying to do?" queried the irate merchant.

"Wanted to see if I could drive a nail," was Caywood's bland reply.

"Well, for mercy sake go out and get a sledge hammer," said the shopkeeper. "Anyhow, get out of here before you smash up all my stock. Those things

DON'T PAINT YOUR BOAT—ENAMEL IT

WITH

THE FINEST FINISH FOR A FINE YACHT

Enamolin

IT WEARS FOUR TIMES AS LONG AS ANY PAINT

ONE APPLICATION WILL WEAR PERFECTLY FOR TWO SEASONS

A pure, white enamel that dries out with a brilliant gloss, showing no brush marks, and closely resembling porcelain. *It never checks, cracks, peels or, flakes.* When soiled it may be *scrubbed* with soap and water, without injury. *It will not discolor at the water line when lying in dirty waters.* Enamolin may be applied over the old paint without scraping or burning off. Enamolin is made in Gloss White, Flat White, Gloss Black, Flat Black and colors. One gallon covers about 600 square feet and is sufficient to finish the average yacht, two coats.

Price, $5.00 per gallon.

One-Half Gallon Cans, $2.60 each; One-Quarter Gallon Cans, $1.35 each; One-Eighth Gallon Cans, 75 cents each. For sale at all Ship-Chandlers or may be had direct from the factory. We prepay the expressage on one gallon or over.

A COUPLE OF UNSOLICITED TESTIMONIALS.

On Board
Chippewa

St. Michaels, Md.,

April 17th, 1909.

Messrs. Emil Calman Co.,
New York, N. Y.

Gentlemen:

Enclosed I hand you check for $5.20 for which please send me one-half gallon of white and one-half gallon of maroon "ENAMOLIN".

It may interest you to know that I painted my boat with "ENAMOLIN" last summer, one coat over old paint, and last October I took a trip through the C. & O. Canal which is "77 locks long". After being slapped and pounded through these 154. locks all I had to do to put the white paint in first class order was to wash it off with a little washing powder. It is the best I have ever used and I cannot recommend it too highly.

Yours very truly,

Meredith Brydry.

COLUMBIA YACHT CLUB
CHICAGO

Commodore's Office

Chicago Sept. 26th 1908.)

Emil Calman Co
Gentlemen:

I have heard so much of your Blue Label Enamolin that I had James Le Boeuf of Oshkosh Wis. use some on the "Columbia" the Columbia Yacht Club's defender in the recent cup races — and do not regret it. Considering the wear and tear, the Boat had during the season I am well satisfied that the Enamolin is all right

Sometime ago some scows loaded with refuse from a Gas Company dumped many loads into the Lake just outside the harbor of the Chicago Yacht Club and the wind would blow the oily waves into the basins that have coated the White sides of the yachts with Green Purple and Brown splotches — and while a great many boats were ruined, it did not effect the Enamolin, as we easily washed it off.

Yours Truly.

J F McGuire

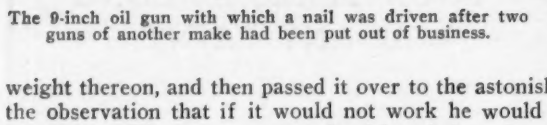
(J. F. McGuire) Commodore Columbia Yacht Club

EMIL CALMAN & CO., 100 William St., New York

weren't built to drive nails with, I tell you."

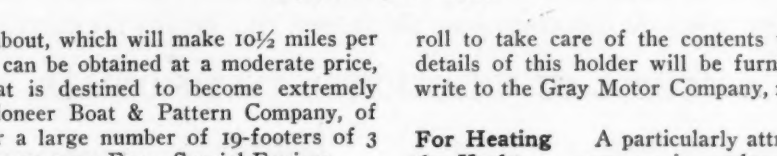
"I know it," said Caywood, cheerfully, and dropped the second oil gun on the floor, stepped on it, and waved the flattened remains before the eyes of the irate shopkeeper, now about to crawl across the counter and summon the police.

"See here, my friend, don't get excited," said Caywood. "Did it ever occur to you what would happen to one of these contrivances you are carrying if a man happened to step on it when the boat rolled a bit? Now let me show you what you can do with one of my guns," and taking one out of his sample case he proceeded to drive a second nail clear up to the head, threw the gun on the floor, planted both feet and all of his weight thereon, and then passed it over to the astonished storekeeper, with the observation that if it would not work he would give him a gross of new ones. The man was too dumbfounded to do anything except stand and watch the energetic salesman.



The 9-inch oil gun with which a nail was driven after two guns of another make had been put out of business.

"Now, just to prevent hard feelings, and to pay for the damage I have done to both the nails and what you have been supposing *were* oil guns, I want to leave half a dozen of mine with my compliments. Here's my card," and Caywood made a jump for his train. Two weeks afterwards a good-sized order came in from that dealer, who has been carrying Gleason-Peters goods ever since. As a matter of fact, an oil gun or any other bit of equipment that you can bang around a bit without putting out of business is of much better service afloat than something that has to be wrapped in cotton wool and handled like an orphan child with an incipient case of the croup.



A 19-foot runabout of the Pioneer Boat and Pattern Co., which is equipped with a 3-hp. Ferro special engine.

An Attractive 19-Foot Runabout A 19-foot runabout, which will make 10½ miles per hour, and which can be obtained at a moderate price, is something that is destined to become extremely popular. Realizing this fact, the Pioneer Boat & Pattern Company, of Bay City, Mich., have built this year a large number of 19-footers of 3 feet 6 inches beam, equipped with 3-horsepower Ferro Special Engines.

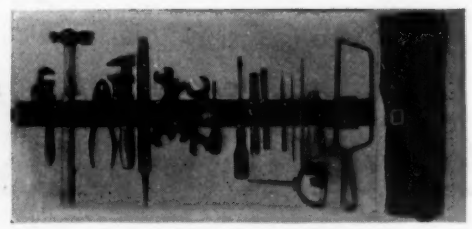
By building a quantity of these launches of one size and design they have been able to effect an economy in labor which has allowed them to embody in the boats a quality of material and workmanship seldom possible at anything like the reasonable price at which they are marketing the craft. Already the number of orders that have been received for this type of craft has been extremely gratifying, and the firm is confident that the boats will prove one of the hits of the season.

A New and Convenient Battery Connection It was not so long ago that the average electrical connection in a motor boat—particularly where the skipper made the connections himself—consisted of a more or less artistic twist of a portion of the wire around the binding post. This was not particularly pleasing to the eye, and, moreover, it was and is open to the objection that in tightening up the binding posts the wire often slipped out of place and the circuit was broken.

An improvement on this was the copper terminal, ending in a metal disc, through a hole in the center of which the binding screw connection was passed. While neat in appearance, and furnishing a secure connection, this pattern has always been open to the objection that it took time to remove or attach, and to the fact that it necessitated the entire removal of the binding post nut from the binding post in order to make or unmake the connection. Sometimes connections had to be made or unmade in a hurry, at night, or in rough water, and there was always a chance of the binding post nut slipping out of one's hands, whereupon a search of the boat and sometimes of the bilge ensued before it was found.

A new device, by Herz & Company, of 295 Lafayette Street, New York City, combines the neatness and security of the disc terminal with the ability to be quickly connected up, and does away with the necessity of removing the binding post nut.

These terminals are of copper and in the form of a two-prong fork, which can be slipped on or off the binding posts on coils or batteries quickly and easily. By reason of their construction they are particularly convenient to the man who does his own wiring. The shank of the fork is a strip of copper, sufficiently long to be easily bent around the insulation of the wire, and the shank itself is stamped with two holes, through which a short length of the bare wire may be passed, brought back, and twisted on itself before the copper shank is wound around the insulated portion. This makes an absolutely perfect electrical connection, and, in addition, a very neat and workmanlike job, while the time and trouble saved in chasing around after dropped binding post nuts, and supplying new ones, will pay for a set of these terminals in a short time.



A handy and practical tool roll, recently brought out by the Gray Motor Co.

A Compact and Convenient Tool Kit The first season a man runs a motor boat he spends a goodly part of his time pulling Stillson wrenches out from under the floor and chasing them along the length of the locker into which he drops them. He subsequently becomes the proprietor of a folding tool roll, which keeps tools together, protects them against dampness and allows them to be stowed in compact shape. The difficulty, however, which he sometimes experiences lies in the fact that the tool holder is often made by a concern with a very vague idea as to what tools are necessary to go into it, and it is either too large or too small, not only in regard to its total capacity but in respect to the size of loops in the center straps through which the tools are thrust.

The Gray Motor Company, of Detroit, Mich., have, this year, solved the difficulty by putting out, at a very moderate price, a well-made tool roll containing eighteen tools, consisting of the following: Two-inch screwdriver, 4-inch screwdriver, 6-inch combination pliers, 8-inch monkey wrench, 8-inch Stillson wrench, 8-inch hacksaw, ⅝-inch cold chisel, ⅜-inch cold chisel, 10-inch flat mill file, 5-inch slim taper file, 6-inch round bastard file, one file handle, 8-ounce machinist's hammer, one coppered steel oiler, one octagon prick punch, one double end S-wrench for ¼ and 5/16 cap screws, one double end S-wrench for ⅜ and 7/16 cap screws, one double end S-wrench for ½ and ⅝ cap screws.

These tools are all of good quality, and are the ones needed for quick repairs and in every-day work around an engine. Moreover, the holder being made to fit the tools, there is a place for everything, and just enough room in the roll to take care of the contents without its being unduly bulky. Full details of this holder will be furnished to any of our readers who will write to the Gray Motor Company, mentioning this magazine.

For Heating the Yacht A particularly attractive line of yacht stoves for heating purposes is produced by the Murdock-Shaw Company, of 125 Federal Street, Boston. These stoves are made in three sizes, with fire-box dimensions as follows: 6 inches by 7½ inches, 7½ inches by 12 inches, and the largest measures 8½ inches by 16 inches.

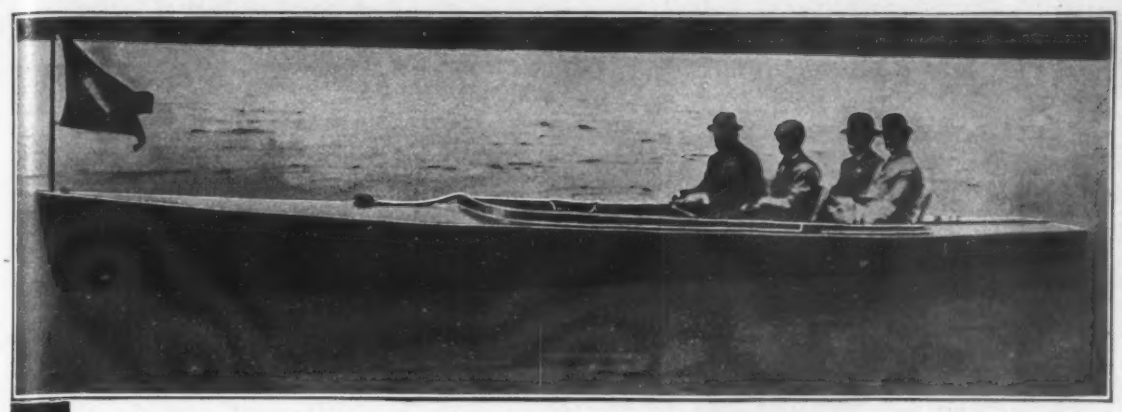
These stoves are all of old English design, modified to meet requirements of the modern American yacht and follow the design shown in the illustration herewith. Two styles are made, one with the pipe hole in the back, after the fashion of the ordinary house stove, and one with hole in the top to economize cabin room.

Herz new open-end terminal, which is easily connected and disconnected; shown also as arranged for battery connection.

The pipe is generally sheet brass, with an inner Russia iron lining, heavily bound with cast and wrought brass. The tiling, as shown in the illustration, is selected to harmonize with the cabin and furnishings; for instance, a dull green tiling harmonizing nicely with a mahogany-furnished cabin. The inner stove-box, or double lining, leaves a space between the outer casing, thereby forming an air chamber which, having holes in the bottom, allows the cold air near the floor to pass up through the stove and become heated in the process, thereby heating the cabin on the radiator principle.

The manner of construction is well worth attention. The inner box is lined with soapstone, and the front of the stove is furnished with an adjustable glass sliding door, easily regulated by thumb pieces on each side. The feet are made of heavy cast brass, sufficiently rigid to withstand the effects of heavy weather, and with flanges at the bottom through which the stove can be bolted to the floor.

The Murdock-Shaw Company are prepared to furnish cast-brass, water-filled deck plates, or deck irons, through which the stovepipe passes through the upper deck. These irons are so constructed that that portion of the stovepipe projecting above the deck may be removed and the



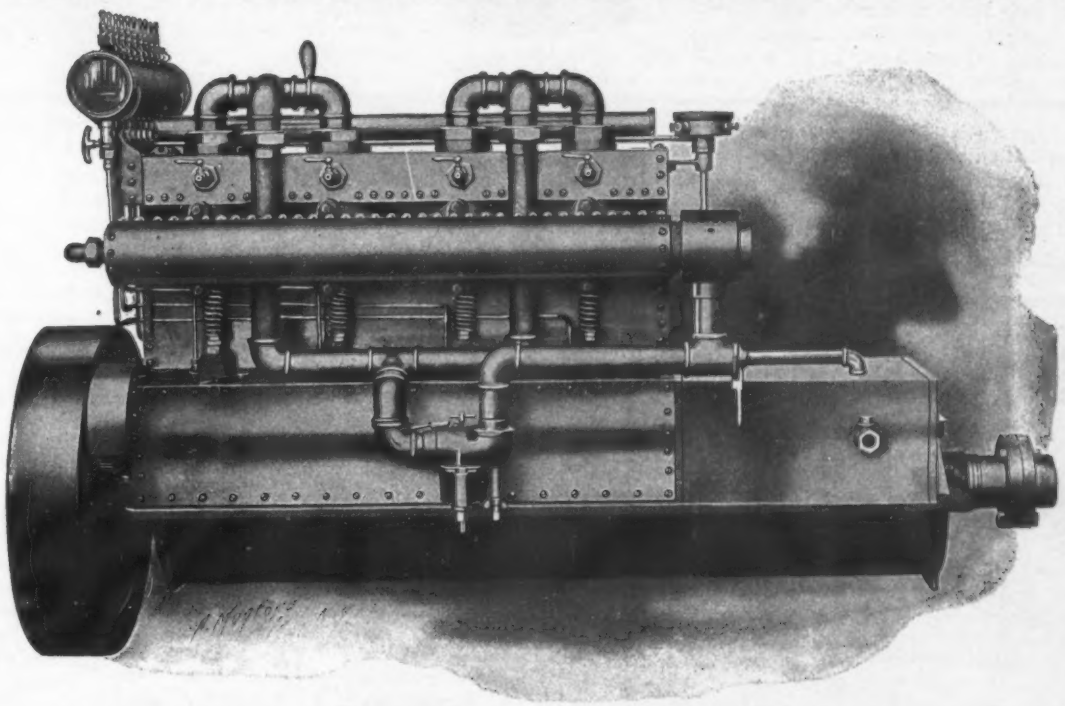
B. B. CROWNINSHIELD, Designer

OUR SPECIALTY
25 feet over all
4 ft. 2 in. beam

Demonstration at our Works, Troy, N. Y.

TROJAN LAUNCH AND MOTOR WORKS

ROOM 502, NATIONAL STATE BANK BUILDING, TROY, N. Y.



"THE ONLY GENTLEMAN'S YACHT ENGINE"
4 Cylinder 6 x 6, Four Cycle
Polished Brass Jacket

SPEED GUARANTEED
with two passengers
2 cylinder,
18 miles per hour
$800

3 cylinders,
20 miles per hour,
$1000

Send for Catalogue

brass cover plate screwed into the plate, making it watertight and flush with the deck.

Electric Sailing and Riding Lights The electric searchlight for power boats is no new thing, but the electric side, bow and riding lights, brought out by the Dayton Electrical Manufacturing Company, of Dayton, Ohio, represent an advance in the application of electric lighting with small generating plants that will interest every boat owner.

The side lights come in pairs, green and red, with glass fronts and polished brass frames. They are regularly equipped with Dayton 13-volt bulbs, and have interchangeable oil burners for emergencies and 4⅜-inch quarter fresnal lenses. They are inextinguishable and unaffected by wind or water, and can be seen at a great distance.

The riding light has an optical glass front, and is regularly finished in polished brass. It also is equipped with Dayton electric 13-volt bulbs, and has interchangeable oil burners and 4½-inch white fresnal globe. The bow light is uniform in style with the Dayton side and riding lights, and is fitted with glass front of 4⅜-inch half fresnal glass.

These lights provide an equipment that can be used in connection with one of the Dayton launch lighting outfits. This outfit gives three possible sources of current for ignition and ample current for fifteen 12-candlepower or twenty 8-candlepower lamps, and is designed to give complete electric service for a boat of from 60 to 100 feet over-all length.

The electric plant consists of the Dayton dynamo, type L, which has an output of 15 volts and 15 amperes at 1,500 revolutions per minute. It has oil-ring bearings, is of the ironclad type and bipolar, with three terminals. The dimensions are as follows: Height, 11½ inches; length, 15¾ inches; total width, 12 inches. Sliding base, 12 by 8 inches, and the weight, complete, with a 3-inch pulley for a 2-inch belt, is 94 pounds.

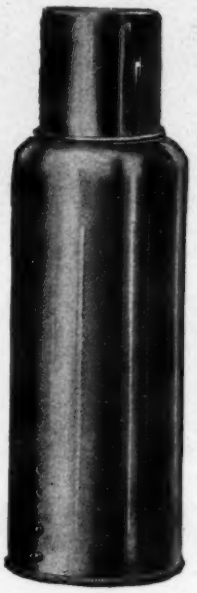
The switchboard is the Dayton, No. 60 S, which serves as a terminal for all the wires between the dynamo and storage battery, and is equipped with an ammeter with a range of from zero to 15 amperes, and a voltmeter with a range of from zero to 25 volts. These metres are guaranteed to an accuracy of 97 per cent, and are fully waterproof, and in every way designed for hard marine service. The readings of the ammeter show the charging rate of the dynamo and the rate at which the battery is being discharged. The switchboard is provided with a small electric pilot lamp for illuminating the meters at night.

In the back of the switchboard there is a very ingenious arrangement, consisting of an automatic cut-out, which breaks automatically the dynamo circuit when engine stops, thereby preventing any possibility of the storage battery current running back through the dynamo. If, at any time, the dynamo does not generate sufficient current to properly charge the batteries, this automatic cut-out prevents connection being made in the charging lines. This obviates all danger of charging batteries at too slow a rate. With this arrangement it is impossible for batteries to short circuit or discharge other than through their proper channels. The automatic cut-out prevents their discharging through the dynamo, the fuses and the lighting circuit prevent their being externally short circuited. The third item of equipment consists of four Hubler-Dayton storage batteries of 12-volt, 120-ampere-hour capacity. By splitting up the storage batteries into sections, easy and convenient stowage of them is made possible, as it is not necessary for all of them to be stored in any one particular place on board the boat. In addition, it makes it possible to use 6-volt current for admission and 13-volt for lighting.

The outfit is designed to carry considerable overload, and more than fifteen 12-candlepower or twenty 8-candlepower lamps may be installed; but in such cases all of them should not be used at once from the battery unless the dynamo is charging it, as otherwise the battery will be discharged too rapidly.

A very practical installation for this 15-light outfit consists of a Dayton 25-candlepower searchlight, three of the 6-candlepower signal lights already mentioned, and fifteen 8-candlepower lamps for interior illumination. The set of storage batteries shown here will furnish light for this equipment for six continuous hours without any assistance from the dynamo.

It will be noticed how compact, moderate weight and extremely simple, is the above equipment, and it certainly represents a great advance in electric lighting systems for the power boat owner who is not himself an expert electrician, and does not care to hire one to look after this portion of his outfit.



The Ever - Ready Bottle, the ability of which to keep hot liquids hot, and cold ones cold has robbed the galley stove and ice box of their sovereignty.

The Suppression of the Stove and the Subjugation of the Ice Box. There is many a man who, on a long night watch, in the chill that comes just before dawn, would like to warm himself up and conquer the drowsiness which crawls over him by a steaming hot cup of coffee. But the cook is asleep in his bunk, the galley fire is out, and that steaming cup, which would mean so much to him, is an impossibility under ordinary circumstances.

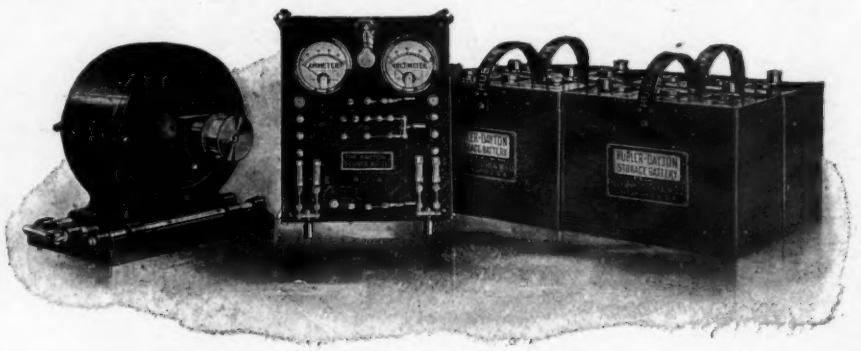
This is just where the Ever-Ready Bottle, which will keep liquids hot for twenty-four hours, proves itself a mighty good friend.

It is made in pint and quart sizes, with a bayonet-capped cover, which forms a cup, from which the man at the wheel may drink his coffee, and have it piping hot, without disturbing any one and with much comfort to himself. For day trips, where the trouble of cooking is to be avoided, it is equally serviceable.

On the other hand, in the middle of a scorching hot day, with the sun blazing down, when the ice has given out and the nearest supply is several hours away, the skipper who has provided himself with a couple of these bottles knows just where he can locate a long, cool drink that will go right to the spot, and this drink can be of any particular variety, from a cocktail to plain mineral water, the only necessary requirement being that the liquid shall be as cold as desired when poured into the bottle.

There are several taking points about the Ever-Ready Bottles which those who have had experience with such articles will be the first to appreciate. They are so constructed that any particular part can be readily renewed, with a cup, cork, bottle and case that may be easily taken apart for cleaning.

They can be obtained singly or in pairs, with either wicker or sole leather carrying cases, which are a great convenience in carrying and for keeping the bottles in good shape. They are bound to prove a very important part of the racing man's and of the cruiser's equipment, and, to a large extent, will free them from the tyranny of the galley stove and the ice chest.

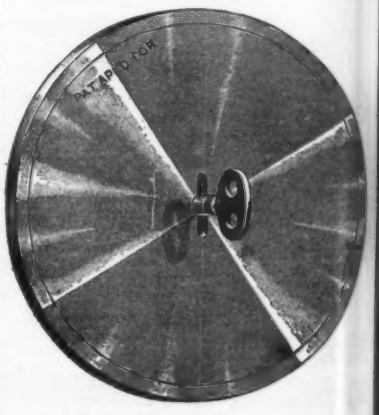


A 15-light Dayton electrical outfit, consisting of dynamo, switchboard and four Hubler-Dayton storage batteries.

Durkee's patent keyless plate. Does not require key to open or close.

For Making the Gasolene Tank Burglar Proof Those who have filled up their gasolene tanks every night, and next morning started out in the proud consciousness of a copious supply, only to have the engine slow down and stop 3½ miles from the nearest supply station, appreciate the advisability of taking nothing for granted, but of ascertaining how much gasolene is really aboard before they turn over the engine. It is these same unfortunates who, having been victims of the gentlemen with taking ways and a bilge pump, will appreciate the lock-deck plate which C. D. Durkee & Company, of

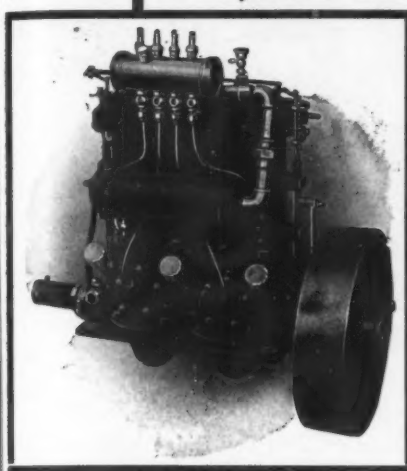
(Continued on page 156.)



Durkee's patent deck plate, lock pattern, to prevent stealing of naphtha.

PALMER

35,000 PALMER ENGINES are "Putting Away" All Over the World To-day



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35,000, that alone speaks quality in the original product. Built in 1 to 30 H. P., 2 and 4 Cycle, make and break or jump spark, 1, 2 and 4 Cylinder.

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We have never heard of a Pigeon Spar collapsing. Their special construction is the reason. Many of the owners of crack racing and cruising yachts of the country—both large and small—will use no other spar.

The Advantages of the Hollow Spar

are lightness and rigidity. These qualities are as essential on the cruising yacht as on the racer. Owing to the comparative lightness of hollow spars and the saving of weight aloft, the violent rolling and pitching in a seaway can de greatly reduced, with a consequent lessening of the wear and tear on sails and rigging. Write us about hollow spars for your boat.

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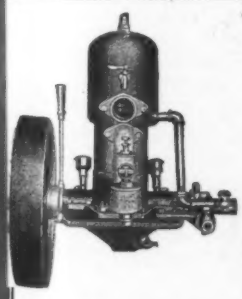

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is so simple to operate, the veriest novice will find it absolutely safe and easy to handle.

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ARE OUR SPECIALTY

OUR 22 FOOTER
Price complete, 7½ H. P. Engine, $590
Length, overall, 22 ft. Beam, 7 ft. 6 in.
Freeboard—Bow, 4 ft. 5 in. Amidships, 1 ft. 10 in. Stern, 2 ft. 3 in.

OUR 20 FOOTER
Price complete, 5 H. P. Engine, $400
Length, overall, 20 ft. Beam, 6 ft. 6 in.
Freeboard—Bow, 3 ft. 6 in. Amidships, 1 ft. 8 in. Stern, 1 ft. 11 in.

Our boats are not to be compared with the usual flimsy and unreliable "factory built" boats but are built by boat builders, whose trade is a distinct one, with the advantages of thoroughly tried models and modern methods of construction.

Write for full description

WEST MYSTIC MFG. CO., West Mystic, Conn.

Driftwood

Victory Wins Brooklyn Y. C. Ocean Challenge Cup

After a smashing race of 285 knots, during which she was driven for all there was in her, H. A. Jackson, Jr.'s, Victory crossed the finish line off the Brooklyn Yacht Club at 2.38.45 P. M., of July 5, a winner over the Sullivan brothers' Mopsa, of the Harlem Yacht Club, in the race for the Brooklyn Yacht Club's Ocean Challenge Cup. The race was started off Belden's Point, City Island, at 10 A. M., July 3, and the course was to and around Vineyard Lightship, thence outside of Block Island and Long Island to Gravesend Bay. Four boats were entered, the Victory, H. A. Jackson, Jr.; Melody, W. J. Matheson; Intrepid, George P. Granbery, and Mopsa, F. C. and W. S. Sullivan, who was defending the cup. Three boats appeared at the starting line, Melody having withdrawn.

The wind was blowing fresh from the northwest at the start, and Victory came out under single reef. Mopsa came out under full sail, but after feeling the weight of the wind outside of the Point, tucked in a single. Intrepid did not start to reef until the preparatory gun had fired, and in consequence was some three minutes late in getting away. The yachts carried the northwest, which blew at times 30 miles or more an hour, down the Sound, and a cracking run was made to the Race. Off Cornfield Lightship Intrepid, while slightly in the lead, carried away her steering gear, and was forced to limp into New London for repairs. Victory turned back and stood by to render assistance if it were needed, but Intrepid declined it.

To the Vineyard Lightship Victory and Mopsa made a fine race of it, but, once hauled to the wind, the former drew away and held her lead to the finish, winning by 2 hours 4 minutes 55 seconds actual and 1 hour 6 minutes 3 seconds corrected time. The winner's elapsed time for the 285 miles was 52 hours 38 minutes 45 seconds. Victory's log follows:

JULY 3.

9.00 A. M.—Single reefed and under way from anchorage N. W. of City Island in fresh N. W. wind. Tacking back and forth at line off Belden Point.
10.00 " Starting gun. First over, with Mopsa on lee quarter and Intrepid third, some 3 minutes late.
10.26 " Execution abeam, ¼ mile N.
11.05 " Matinicock abeam, 1 mile S.
12.30 P. M.—Green's Ledge abeam, 2 miles N.
2.30 " Middle Ground abeam, 2 miles S.
4.00 " Wind moderates a little. Set spinnaker. Mopsa out of sight.
5.30 " Faulkner's abeam, 2 miles N.
6.00 " Wind heading. Took in spinnaker.
7.00 " Set ballooner. Shook out reef.
7.30 " Intrepid abeam, 100 yards N.
7.50 " Cornfield abeam, ¼ mile N. Intrepid 25 yards ahead.
8.10 " Intrepid steering wildly, shoots into wind and lowers mainsail, then jib. Run on about 2 miles, when Intrepid burns green flare. Take in ballooner; set working jib and double reef mainsail. Beat back to Intrepid, burning red flares, but no return signal is given. Intrepid found at anchor with steering gear broken. Declines assistance. We stand by for ten minutes, offering to help or tow.
8.50 " On our course under double-reef mainsail, thinking we are only boat in race.
12.00 M.—Sight Mopsa on lee beam, in race.

JULY 4.

12.20 A. M.—Mopsa passes us. Shake out reefs. Set ballooner and spinnaker.
12.50 " Pass Mopsa.
2.50 " Blockers N. Light abeam, 3 miles S.
4.00 " Mopsa 2 miles astern.
6.15 " Sight Sow and Pigs dead ahead.
7.00 " Round Sow and Pigs, and head W. S. W. on starboard tack.
7.30 " Mopsa rounds.
11.15 " Blockers S. Light bears N. W. 4 miles. Tacked in-shore.
1.15 P. M.—Under Block Island. Short hitches along S. W. shore. Heading W. ½ N. in light air.
3.25 " Montauk bears N. ½ mile.
3.40 " Short hitches along beach.
4.00 " Wind N. W. and little stronger. Heading W. by S.
10.00 " Shinnecock abeam, 2½ miles N. Heading W. by S.

JULY 5.

4.00 A. M.—Fire Island abeam, 3 miles N. Wind heading.
5.20 " Whale spouting ¼ mile to leeward and 8 miles S. W. Fire Island. Wind very light.
5.30 A. M.—Stood in to Jones' Beach. Short hitches along beach.
7.50 " Jones' Inlet bell close aboard. Wind very light. Short tacks.
9.10 " Whistler close aboard. Beat in under beach past Rockaway; standing out for the Shoal, then in under Coney Island to avoid head tide. Set ballooner; going astern off Coney Island. Little more air from S. W. Beat the tide around Norton's Point. Finish mark boat not located as described in circular. Cross finish line off Brooklyn Yacht Club 2.38.45 P. M., and anchor.
3.40 P. M.—Mopsa still out. We win!

CREW.

H. A. Jackson, Jr., Horatio Page, J. Harry Curtis, Charles F. Tillinghast, Charles Reuterman.

The Bay Ridge to Marblehead Race

The twelve boats which crossed the line at 10.35 A. M. on July 17 in the Ocean Race from Bay Ridge, N. Y., to Marblehead, Mass., were: F. D. Gheen's new 40-footer Kitcinque, T. J. Flynn's Josephine, J. S. Poyen's Nimrod, C. J. Smith's Square Deal, C. D. Randall's Northerner, L. C. Wade's Sagamore III, C. O. Lailer's Lizzie L., H. Weismann's Kittrois, the third of the famous "kitten" series and formerly owned by Frank D. Gheen; S. W. Granbery's Irene II, winner of the Albany to New York Race of this year; G. McMinn's Niobe, W. Duncan's Barbara, and F. D. Giles' Elmo II, the winner of the time prize in the New York to Albany and return race.

The start was off the Crescent Athletic Club's Bay Ridge house, and the finish off the Eastern Yacht Club at Marblehead. The new course along the south shore of Long Island made it practically an ocean race this year.

The Irene II was over the line first, closely followed by Kitcinque, the others getting off together well in a bunch. Northerner's engine went out of commission off Seagate, causing her withdrawal.

A clogged gasolene pipe, causing a back fire in the carburetor, was responsible for the loss of Frank D. Gheen's new Kitcinque, one of the most, if not the most, promising racing cruiser of the year, between Block Island and the Vineyard. Designed by Morris M. Whitaker, and equipped with 60-horsepower Sterling engine, she was a hot favorite, and was running well within her time allowance, when, at midnight, Saturday, the 18th, the accident occurred.

Her designer, who was one of the crew, states that the accident was due to clogging of the gasolene feed pipe and the consequent back firing in the carburetor, causing enough blazing gasolene to be thrown into the bilge to ignite some loose lubricating oil floating there. Mr. Gheen has the sympathy of the entire yachting fraternity in the loss of his boat.

The winner of the race was Elmo II, her corrected time being 25 hours, 19 minutes and 55 seconds. Josephine finished first with a corrected time 28 hours, 30 minutes and 15 seconds. Lizzie L., Sagamore III and Nimrod finished third, fourth and fifth, respectively.

A fully illustrated account of the race in detail, written by our special representative, L. DeB. Handley, one of the crew of Kittrois, will appear in our September issue.

The Sonderklasse Boats

The yachts of the *Sonderklasse* are now meeting whenever possible, and are rapidly getting into racing trim. On some of them changes have been made to improve their sailing qualities, and between now and the time set for the trial races, August 16-21, those in charge will do everything possible to get them keyed up. There are twenty-four of these yachts racing this year. Eighteen of these have been sailing off Marblehead; six, including the Mower-designed boat Bessie, are racing on Buzzard's Bay, and one, Joyette, another Mower boat, has been sailing on Long Island Sound, against the class Q boats and the American 21-footers. This yacht in one race, that of the Indian Harbor Yacht Club, made a very creditable showing, finishing ahead of the raceabouts. Just how she compares with other boats of her class will not be known until she is taken to Marblehead to race there.

Eighteen of the class have taken part in nine races sailed off Marblehead.

The Quincy Cup Challenger

The Eastern Yacht Club has selected the *Sonder* boat Wolf, owned by Caleb Loring, as the challenger for the Quincy cup, held by the Quincy Yacht Club.

From Stem to Stern

Every part of every yacht needs 3 in One. It's the best oil on earth for preventing tarnish and verdigris on brass parts and trimmings. Prevents rust on metal surfaces in all climates and weather. 3 in One lubricates motors and all light mechanisms. 3 in One cleans and polishes woodwork, restoring the lustre of dull varnished surfaces.

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Try This At Our Expense

Write at once for sample bottle and try on brass railings, nickel trimmings, furniture, tools, guns, razors. We also send a big booklet telling how to use 3 in One for a hundred different purposes. The sample and dictionary are both free. Write at once.

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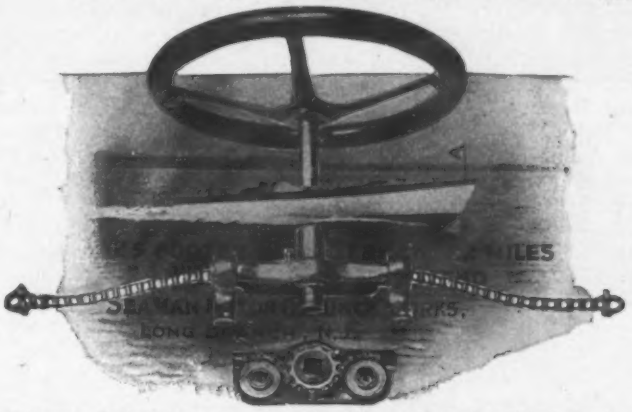
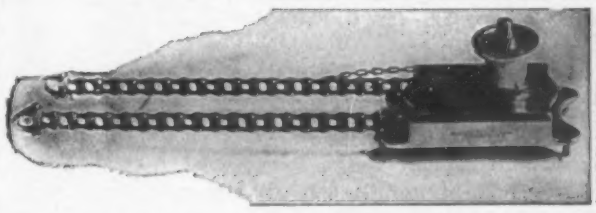
SEAMAN'S PATENT CHAIN STEERERS

Cover Every Possible Requirement



Chain Steerer adjustable to any angle or placed in any desired position in boat. This gear has seven sprocket teeth engaged at all times. Full roller chain and guide, all friction surfaces run on rollers. Simple and positive locking device.



Combination Steerer bolted to keel to be used with shaft to pilot house or bridge deck. Also for side steerer with any style of wheel. Chain leads forward or aft as desired.

For sale by all leading marine supply houses. Send for Illustrated Price List.

Seaman Motor and Launch Works
LONG BRANCH, N. J.

For DECK AND ALL OTHER SEAMS

ELASTIC SEAM-COMPOSITION
TRADE MARK

Weather Checks, Floors, Bedding and Glazing of Skylights, Conservatories, Pointing of Stone Work, in fact, in all places where a perfectly tight joint is wanted, use Elastic Seam Paint and Elastic Seam Composition. The Elastic Seam Composition is made in white, black gray and yellow, and to order in all colors.

Send for new booklet. Sample sent on receipt of thirty cents in stamps,

ELASTIC GLOSS YACHT WHITE

The whitest gloss white in existence. Works as smooth as oil paint. Dries in from 6 to 12 hours. Withstands acids and gases, will retain its gloss the entire season. Can be touched up any time without showing. One coat over a coat of Elastic Flat Yacht White will last all season. **Price, $4.00 a gal.; $2.00 a half gal.**

ELASTIC FLAT YACHT WHITE

It is the whitest yacht white. In spreading and covering unsurpassed. Dries in 1 to 2 hours. Withstands acids and gases. Withstands hard usage and scrubbing. Two coats are sufficient all season. **Price, $3.00 a gal.; $1.60 a half gal.**

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E. F. Hurlbert	Marine Basin	Bath Beach.
C. N. Cook & Co.	Alexandria Bay	New York.
M. G. Stoneman & Son	Broadway, Beaver, State and Quay Sts.	Albany, N. Y.
The Donahue Hardware Co.	Sandusky	Ohio.
H. Steffens Co.	337 Fell Street	Baltimore, Md.
E. A. Burnside	Point Pleasant	West Virginia.
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Elisha Webb & Son	Water & Chestnut Streets	Philadelphia, Pa.
The Chas. F. Beebe Co.	Portland	Oregon.
Chas. A. Wurr	179 Hallock Avenue	New Haven Conn.
A. W. Adams	16 North Market Wharf	St. Johns.
The Paulsen Co.	25 East Bay Street	Savannah, Ga.
Geo. F. Chase & Co.	323 East Bay Street	Jacksonville, Fla.
Marine Paint Corporation	Norfolk	Virginia.
C. J. Hendry Co.	64 Clay Street	San Francisco, Cal.
C. M. Jacobsen	238 Jefferson Avenue	Detroit, Mich.
John S. Davenport & Son	79 Atlantic St.	Stamford, Conn.
John Leckie, Ltd.	76 Wellington Street, West	Toronto, Ont., Can.

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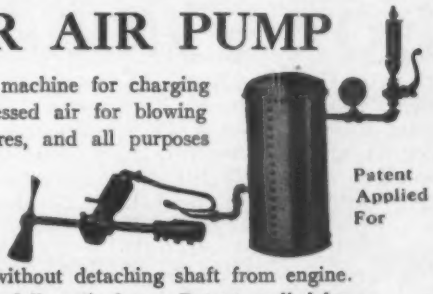
THE STAR AIR PUMP



Patent Applied For

Most simple and reliable machine for charging Storage Tanks with compressed air for blowing Whistles, inflating Auto Tires, and all purposes where compressed air is required.

Pumps can be furnished with split cam and hinged boxes to attach to shaft, without detaching shaft from engine.

Send for circular C, giving full particulars. Patent applied for.

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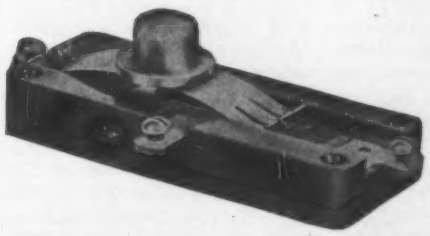
W. & J. TIEBOUT, Marine Hardware

The THOMPSON SWITCH

For All Devices Using Battery Currents



This switch is made for changing from the battery to the dynamo or magneto without losing a spark.

Placing the spring on one terminal puts battery on; placing the spring on the other terminal gives full strength of the dynamo, placing the spring in center breaks the circuit and stops the motor.

Send for circular C, giving full particulars.

W. & J. TIEBOUT
118 CHAMBERS STREET - - NEW YORK

Our No. 15 Catalogue of Motor Boat Hardware will be issued about the 15th of March.

Some Recent Transfers

The following sales have been effected through the office of Henry J. Gielow: 55-foot fast gasolene cruiser Ignita, sold for Lindsay Russell, receiver for Ennis & Stoppani, to George H. Stetson, of Philadelphia; 50-foot auxiliary yawl Katherina, A. Homer Skinner, of Fall River, to J. W. Horner, of New York; 38-foot cabin launch Harriett, C. R. Mulford, of Trenton, to E. C. Cochran, Memphis, Tenn.; 37-foot raised-deck cruiser Eronel, Samuel Cochrane, of Jersey City, to S. H. Gillespie, of New York; 36-foot auxiliary yawl Kathleen, R. S. Pike, of Toronto, to Chas. F. Brenner, Dayton, Ohio; 35-foot yawl Anna, F. B. Bragdon, New York, to Frederick Schuchardt, Nyack, N. Y.; auxiliary catboat Annona, G. N. Jacobs, Cotuit, Mass.

The following sales are reported by Stanley M. Seaman, 220 Broadway, New York: Gasolene express cruiser Faalua, sold by Mr. G. Gorham Peters, Boston, Mass., to Mr. I. E. Raymond, New York; cruising launch Janet, Mr. J. G. Campbell, Huntington, L. I., to Capt. H. B. Crosby, Fort Slocum, N. Y.; yawl Rana, Mr. E. C. Myrick, to Mr. H. L. Maercklein, Hartford, Conn.; auxiliary yawl Yonondio, Mr. C. A. Godshalk, Philadelphia, Pa., to Mr. Frederick F. Carey; cruising launch Hopewell, Mr. I. E. Raymond, to Mr. W. J. Cassard, Jr., New York City; launch LaVadette, chartered by Mr. Frank A. Egan, New York City, to Mr. Geo. F. Chamberlin, Rye, N. Y.; gasolene, seagoing cruiser Daisy, chartered by Col. Robert Galloway, to Mr. Geo. J. Whalen, New York; cruising launch Columbine, chartered by Mr. C. M. Gould, New York City, to Mr. Robert Winsor, Boston, Mass.; hunting-cabin launch, Mr. I. E. Raymond, New York City, to Messrs. G. O. Thomas & Alan Gibson.

The Hollis-Burgess Yacht Agency reports the following sales: 35-foot gasolene launch Terrapin, Wm. W. Lee, of Northampton, Mass., to Wm. H. Milliken, of Portland, Me.; 26-foot auxiliary sloop Buccaneer, President A. Lawrence Lowell, of Harvard College, to F. R. Wright, of Campello, Mass.; 18-foot knockabout Alarm, ex-Com. Edward P. Boynton, of the Boston Yacht Club, to A. D. Seymour, of New York; knockabout Wolraf, J. S. Farlow, of Boston, to Willard Welsh, of Boston; fast 22-foot sloop Sanderling, by Jas. H. Glidden, of Boston, to S. P. Sanger, of Brookline, Mass.; *Sonderklasse* sloop Hayseed III, H. B. Bowden, of Boston, to Charles P. Burgess, of Brookline, Mass.; the 15-foot sloop Nutmeg II, Allen C. Jones, of Boston, to Stephen C. Harris, of Providence, R. I.; 35-foot auxiliary cutter Melusina, E. A. Doyle, of Lynn, Mass., to John J. Martin, of the Boston Yacht Club; 30-foot gasolene launch Molly B. III, N. R. Blaney, of Marblehead, Mass., to Paul D. Rust, of Boston; gasolene launch Hunky, by Felix Rackemann, of Boston, to G. M. Wynkoop, of New York.

The following sales have been made through the office of Messrs. Tams, Lemoine & Crane:

The auxiliary schooner yacht Tekla, sold for Mr. Alessandro Fabbri to Mr. Richard Henderson Deeves (the Tekla is a steel schooner, designed by A. Cary Smith, and built in 1902. She is equipped with a 75-horsepower Standard motor). The launch Atlantic, purchased for Mr. Louis C. Clark. The auxiliary yawl Idelon, sold for Mr. William H. Parsons to Mr. E. L. Howe, trustee of the Andrew J. McCosh Memorial Fund, Princeton, N. J. (the Idelon is going to be given to Dr. Grenfell for missionary work in Labrador). The launch Conspirator, sold for Mr. Heywood H. Whaples to Mr. Frederic Gallatin, Jr. The auxiliary yawl Oriole, by Mr. J. H. Evans to Mr. Henry W. Taft. The launch Elmo, sold for Mr. J. S. Poyen, Jr., to Mr. Leonard E. Opdycke. The sloop Fritter, sold for Mr. Dutee Wilcox Flint, of Providence, to Mr. Oliver Wolcott Roosevelt.

News of the Yacht Clubs

Joint Two Days' Cruise

The Seawanhaka Corinthian Yacht Club and the Indian Harbor Yacht Club have arranged to hold a joint two-days' cruise from Greenwich to New London just before the cruise of the New York Yacht Club. This cruise, which will consist of two days' racing, will start from Greenwich on Tuesday, August 3, and that day's run will be to New Haven. On Wednesday, August 4, the run will be to New London, where the fleet of the New York club is to rendezvous on Thursday, August 5. These races will be open for yachts of any club and for all classes down to Class P. This combined cruise will take the place of the Indian Harbor Club's annual race to New London, which in former years has taken the yachtsmen to New London in time to witness the annual rowing contest between Harvard and Yale.

New Rochelle Yacht Club Cruise

Twenty-eight entries have already been received for the annual cruise of the New Rochelle Yacht Club, which this year is something of a departure from cruises of most of the Sound clubs, in that it is planned to go as far East as Nantucket.

The fleet will rendezvous in Echo Bay on Friday, August 6.

Saturday, August 7, squadron run, New Rochelle to Black Rock.

Sunday, August 8, squadron run, Black Rock to Thimble Islands.

Monday, August 9, squadron run. Thimble Islands to New London.

Tuesday, August 10, squadron run, New London, to Newport.

Wednesday, August 11, squadron run, Newport to New Bedford.

Thursday, August 12, fleet will lie at anchor.

Friday, August 13, squadron run, New Bedford to Edgartown.

Saturday, August 14, squadron run, Edgartown to Nantucket.

Sunday, August 15, at anchor at Nantucket.

The return will be *ad libitum*, as many boats as desire returning together, probably via Block Island, Port Jefferson, etc.

The club will wind up its active season by its summer regatta, August 28, and the club cruise, September 4 to 7.

Stamford Y. C. Issues a Chart

The Stamford Yacht Club has just issued an enlarged chart of Stamford Harbor, showing buoys, sounding and roadway in detail. This chart will be mailed free to yachtsmen on request, and should prove of great value to all boats visiting the club and anchoring off the club float.

Illinois Valley Yacht Club Cruise

In conjunction with the annual races of the Western Power Boat Association at Peoria, Ill., August 17 and 18, the Illinois Valley Yacht Club has planned a three days' cruise, to arrive at Peoria the day preceding the regatta.

This cruise is scheduled to start from Bridgeport (I. and M. canal entrance, Chicago) on August 14, at 9:30 a. m., the first day's run ending at Channahon; August 15, Channahon to Ottawa; August 16, Ottawa to Peoria.

It is the urgent wish of the club and committee that a very large number of boats go together on this cruise down the canal and river, as such runs strongly demonstrate the growing value of motor boats for pleasure traveling, and bring about closer relations between individuals and clubs, and generally benefit the sport and industry. A special invitation is extended to the ladies to participate in this cruise.

The handsome flagship Swastika, Commodore Noble, Jackson Park Yacht Club, will lead the

Western Power-Boat Association Annual Regatta

On August 17 and 18, 1909, a large programme of motor-boat races will be run for all classes of cruisers and speed boats, and other (handicap) classes, special circulars of which will gladly be furnished upon application to the committee.

The high-powered speed race will be the most important event of the year, and is for the Western championship; grand free-for-all, 40 feet or under, the winner to receive a cash prize of $500 and a sterling silver cup valued at $250. From the character of the entries already received, and assurances from a number of others who state that they will be represented, it is expected that many prevailing records will be broken, and that this event will be of the class of the international and gold cup contests in former years on the Hudson River. The course is an ideal one, and the club is erecting a grand stand of large seating capacity for spectators. Five thousand dollars will be spent by the citizens of Peoria on this and other aquatic events during this regatta.

Taunton Yacht Club

The recent holiday regatta of the Taunton Yacht Club was a great success from the racing standpoint. The first race was from scratch by four cruisers over a 12-mile course, and was won by Idlehour, C. V. Sanders. Second place went to Aline, Perra Bros. Third place to Tulmar, J. S. Williams. Gertrude, owned by S. M. Witherell, was delayed by engine troubles and did not finish.

The second race, for boats with a record of not less than 46 minutes for the 6-mile course, was won by Albert, owned by B. Eccles, while Ruth G, H. Dudley, owner, was second.

The dories sailed a fine race in a strong breeze. 23, owned and sailed by A. K. Crowell, was first; Zu Zu, F. P. Canedy, second; Alma, A. Ashley, third.

The third power-boat race was for the handsome cup presented by Commodore Louis J. Schmidt. Fourteen boats were handicapped and started over a 12-mile course. Aline, Perra Bros., won the event, with Lorraine second and Idlehour third.

Sacramento Boat Club

At Colusa, Cal., on June 19, there was held a very successful regatta, under the auspices of the Sacramento Boat Club. There were more than thirty motor boats on the river, ranging from the narrow little power canoes to the larger craft, like the Merry Widow, capable of carrying twenty or more passengers.

The officers of the Sacramento Club had the arrangements well in hand, and the various events were pulled off exactly on time, not one race starting a fraction of a minute behind time. This excellent management was due to the perfect knowledge of the game by T. W. Madeley, chief of the regatta committee, and the judges, L. T. Fefebre, of the Washington Motor Boat, and J. G. Knowles, of the Sacramento Motor Boat Club.

When it is realized that it required a journey of 125 miles up the river to bring the Sacramento boats to the scene of action, and that the club committee had to perfect all its arrangements at Sacramento, one will realize the task which the Sacramento Boat Club put through so successfully.

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They are very light in weight, finely finished and thoroughly practical. Every garment bearing the sign of the fish

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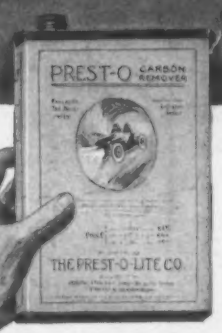
Prest-O-Carbon Remover



Don't Tear Down Your Engine!

An engine torn to pieces and scraped is seldom as good as before. Prest-O-Carbon Remover chemically dissolves and removes every particle of carbon from cylinders, pistons, piston rings and valves.

For Marine, Auto. and Stationary Engines

Cannot injure the metal. Cleans one cylinder perfectly in an hour for 25 cents or less. Increases compression, power and durability. Does a better job than scraping. Simply apply with an oil gun.

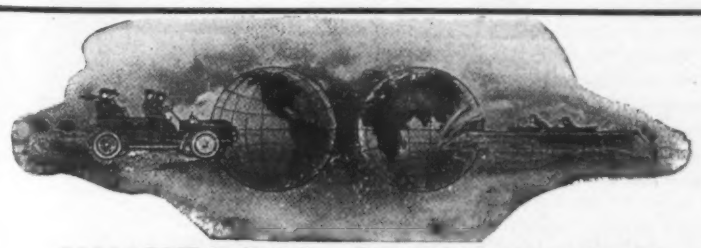
We Will Refund Your Money

if Prest-O-Carbon Remover doesn't do all we claim for it. Prices: Gallon, $3.75; Half Gallon, $2.00; Quart, $1.00. Beware of imitations containing kerosene or strong acids. I your dealer does not supply you promptly, send your order to us, to be shipped from our nearest office.

The Prest-O-Lite Co., 238 East South Street Indianapolis, Ind.

Branches at New York, Boston, Philadelphia, San Francisco and Toronto

Makers of Prest-O-Lite Gas Tanks



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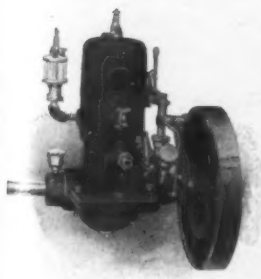
Power Whistle passing Government Inspection from -	$12.00 to $50.00
Complete set of Galvanized Lights, consisting of side and bow lights - - - - - - - - -	$3.20 per set of three
Fog Horns - - - - - - - - - - - - - -	.40
8 in. Pol. Bell Metal Bells - - - - - - - - - - - -	2 00
Pol. Brass Bilge Pumps - - - - - - - - - - - -	1.90
Pol. Brass Hand Power Chime Whistles - - - - - - - - -	3.75
Life Preservers - - - - - - - - - - - - -	.85

Let us send you one of our new 1909 Marine Catalogues.
We carry a full line of Oils, Greases, Spark Plugs, etc., in fact everything used in connection with motor boats.

Universal Auto & Motor Boat Supply Co., 113 Chambers St., New York City

Gasoline Engine Bargain For A Limited Time



We are offering our 2 H. P. motors, complete with regular boat equipment, for only **$40.** A powerful, easy starting engine, built in a well-equipped modern factory. This is what one customer writes about a new engine that he had just installed:

Cosmopolis, Wash.

"Engine arrived safely, is installed and runs fine. Of course she is new and a little stiff, but is working down in very nice shape and giving good satisfaction all around. She started the first time on the third turn and has not missed once since."
W. L. DUNHAM.

It will pay you to investigate this engine. We build engines in the following sizes, 2-3-4 and 8 H. P.

Write for 1909 Catalog

NORTHWESTERN STEEL & IRON WORKS, - Eau Claire, Wis.

INDIAN GIRL CANOES

Strong, Light, Swift-Moving Water Craft

If you are planning a cruise, a hunting or fishing trip, or a plain vacation, you do not have to experiment with the canoe you take along. An Indian Girl Canoe designed and made by the Rushton people is the product of 36 years' experience in making serviceable high-class water craft for veterans in the water sport.

It is a canoe modeled along graceful even lines without sacrificing beauty for strength, nor strength for beauty, a quick, dancing speed-boat, easily sent ahead or round, as sensitive to your paddle as a piece of delicate machinery, the canoe for the sport lover, the yachtsman, the man who camps or hunts or fishes.

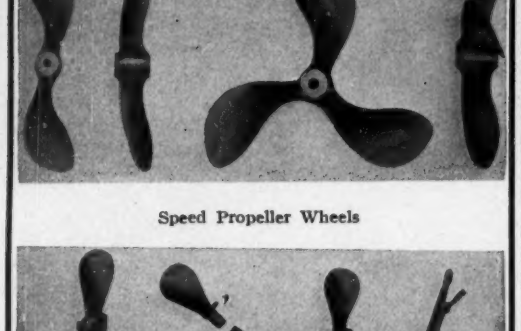
Powerfully ribbed to withstand rocks or sunken snags. It is the canoe to use in venturing into unknown waters, and it will remain seaworthy for years.

The Indian Girl is made in different sizes at different prices, from the leisurely family canoe to the long slender dart used by the racer.

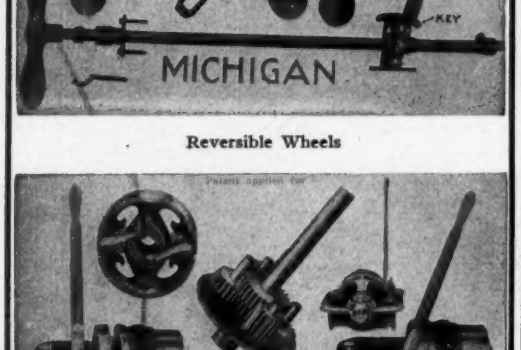
Our Free Book is full of good information concerning canoes which will interest you if you are an out-door man. If your dealer does not handle Rushton canoes we will supply you direct. Look over our styles in the book, You will find one to suit you.

DROP US A CARD TO-DAY

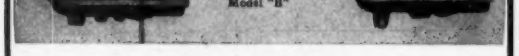
J. H. RUSHTON, Inc., 652 Water St., Canton, New York



Speed Propeller Wheels



Reversible Wheels



Reverse Gears

NOTICE

To the Motor Boat Users

Now is the season for overhauling and refitting your boat.

Our sixty-page catalog free, showing complete lines of Reverse Gears, Speed Propeller Wheels, Attractive Modern Marine Hardware Air Pumps, Whistles and Under Water Exhausts.

Every person interested in boats should have our Catalog.

Prices right, superior quality of material

Mention this magazine — Special discount next thirty days.

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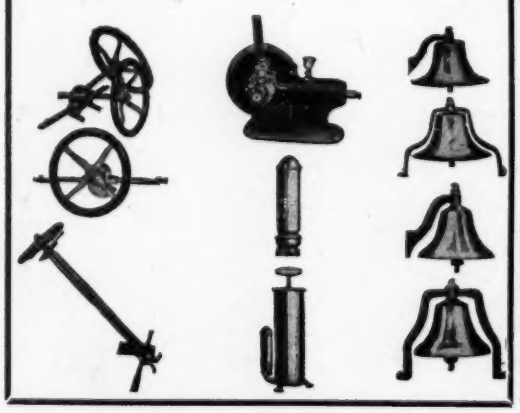
Office and Factory:

GRAND RAPIDS, MICHIGAN, U. S. A.



For Making the Gasolene Tank Burglar Proof

(Continued from page 150.)

2 and 3 South Street, New York, make to cover the filling pipe of the gasolene tank. This deck plate is made in either 3½ or 4-inch sizes, is unlocked by means of a real key, such as is used in padlocks, and cannot be unlocked in any other way. As the cap fits over the screw heads in the outer plate no gasolene-abstracting individual can utilize a screwdriver as a substitute for the key. Of course, it can, like almost any other lock in existence, be smashed open, but not only will the smashing process create more noise than is altogether compatible with the ethics of refined burglary, but the general mess in sight next morning acts as timely notice of the advisability of pouring more fuel into the tank.

Another type of deck plate is the Durkee keyless plate, the catch of which is sprung by the insertion of a finger through the central hole, and thus has no threads to cross or cut.

Cape May Race

(Continued from page 105.)

her sharp bow, and throwing them aside in great masses of foam, she bored through them with a power that one would hardly credit her with, and kept on without pause.

By 9 o'clock the wind had fallen considerably, and we were sailing along comfortably, the schooners now mere specks at the horizon, when there was an ominous snap aloft, and the next minute the gaff came tumbling about our heads. The wire peak halyard had chafed at the mast, and parted as if cut with a knife. It was but the work of a few seconds to drop the throat; and then, while Captain Nelson and McCarthy spliced the wire, we kept on under jib and staystail, going 1 yard forward and 2 to leeward.

Ten o'clock was long gone when we finally got our mainsail on again, after having lost about two hours of sailing. The schooners had disappeared, and one of the rear boats had picked us up sufficiently to be discernible. The breeze had flattened out meanwhile, and now became fluky, dropping out completely by 11 o'clock. Finding that the tide was throwing us back, we anchored. Then for two interminable hours we sat, watching the horizon for a sign of wind. It finally sprang up lazily from the southwest, once more giving us a broad reach that later developed into a spinnaker run.

The wind freshened again in the late afternoon, and held steadily all night, with slightly varying westerly directions. A bright moon shone until morning, and made sailing pleasant and easy. At about 2 o'clock we sighted Fire Island Lightship, and at 3.05, when it was abeam, we burned a coston signal to display our number. We were too far away, however, to hail those on board, so could not tell when the other boats had rounded. We discovered later that our ship's clock was a bit off, but the figures given here were all taken by it, so the relative times are correct.

Fate was evidently not with us on the race. We were the first of the fleet to have to tack in going from Fire Island to Scotland Light. With a spanking breeze, heeling us well down, we eventually crossed the finishing line at 9.40, hopelessly beaten, but feeling proud of the showing Gardenia had made in the bad weather. It is worth pointing out that before the wind attained a high velocity, and while the water was comparatively calm, she held her own, even with the schooners. The run from Gravesend Bay to Fire Island Lightship, a distance of over 50 nautical miles, was made in 5 hours 4 minutes, or at the average speed of 10 knots an hour. Wonderful going for a boat of her inches.

Trade **LOWELL** Mark

Reg. U. S. Pat. Off.

DUCK

Ask the Winners

HERE ARE TEN WINNERS WHICH HAVE CROSSED THE LINE FIRST WITH LOWELL DUCK

ELMINA II	CHERRY CIRCLE
DERVISH	QUEEN
DORELLO	AVENGER
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VIM	ELEANOR

THERE ARE HUNDREDS OF OTHERS

Regular for Cruising

Special for Racing

Lowell Weaving Co.

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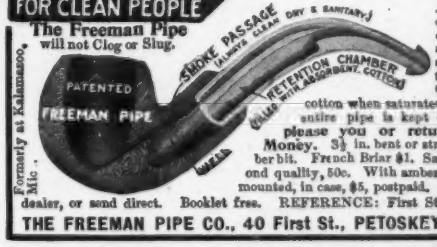
A CLEAN SMOKE FOR CLEAN PEOPLE

"As sweet as a nut. As clean as a whistle."

The Freeman Pipe will not Clog or Slug.



Absorbent cotton catches all saliva and nicotine. Change cotton when saturated, thus the entire pipe is kept dry. We please you or return your Money. 3½ in. bent or straight rubber bit. French Briar $1. Same in second quality, 50c. With amber bit, silver mounted, in case, $5, postpaid. Ask your dealer, or send direct. Booklet free. REFERENCE: First State Bank.

Formerly at Kalamazoo, Mich.

THE FREEMAN PIPE CO., 40 First St., PETOSKEY, MICH.

IS YOUR BOAT FOR SALE?

An advertisement in YACHTING will Sell her

BECAUSE

Yachting goes to People who Buy

Send for our Special "For Sale" Rates.

The Best Lighted Yachts

ARE EQUIPPED WITH

The Safety Storage System

Adapted to any size craft—Sail or Power. Tank can be stored anywhere.
Tank of convenient size for whole season's lighting.
Economical to install and maintain.
No working parts. Nothing to get out of order. Empty tank exchanged for full.
Permitted by National Board of Fire Underwriters and U. S. Steamboat Inspection Service.
Illustrated booklet and estimates cheerfully furnished.

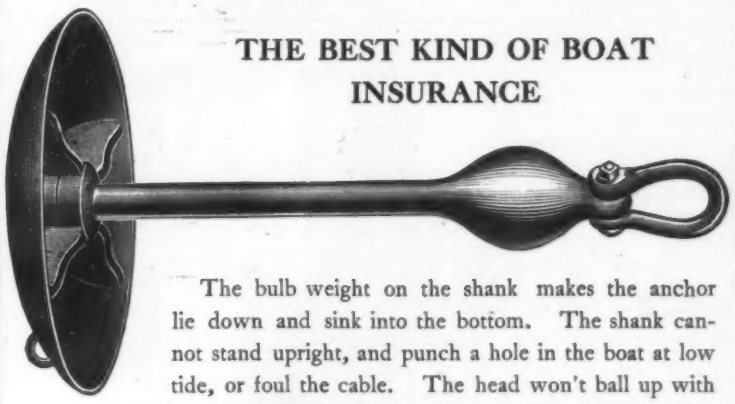
The COMMERCIAL ACETYLENE CO., 80 Broadway, New York City

THIS IS

The Bulb Shank Mooring Anchor

The Only Real Mooring—It Always Holds

THE BEST KIND OF BOAT INSURANCE



The bulb weight on the shank makes the anchor lie down and sink into the bottom. The shank cannot stand upright, and punch a hole in the boat at low tide, or foul the cable. The head won't ball up with mud. The trip line eye ensures the anchor coming up easily at the end of the season.

Send for our free "Mooring Book" and stop bothering with the junk pile that you've been fastening to your cable each spring.

FAIRHAVEN IRON FOUNDRY CO.
2 WATER STREET, FAIRHAVEN, MASS.

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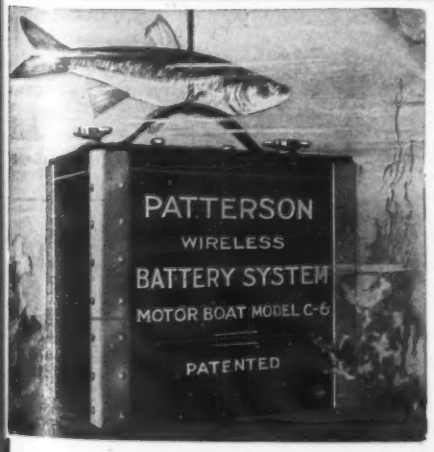


Patterson Wireless Dry Battery System

"You Screw the Battery in—We've Done the Rest."

You'd hardly ask your Battery Set to work like this—but if you'll use the "Patterson System" when the emergency requires, it will do it.

This System revolutionizes the old methods of Battery Sets—its fundamental principle is a Screw Top Cell Unit, screwing into a solid hard rubber plate, which plate forms a waterproof cover for the entire outfit; batteries are suspended from the plate. There can be **no loosening connections—no bad contacts—no troubles from dampness and corrosion!**

A Wireless Battery Holder will not only maintain a Set of Batteries at **HIGHER AMPERAGE**, but will in a year or so **save the Motor Boat owner its entire cost from the greatly increased life each Set of Cells will give,** because of the Holder's scientific design for their protection and economical maintenance.

A WIRELESS DRY BATTERY HOLDER will last a lifetime.

Emergency Clips are provided so old style "Binding Post" Cells can be used any time "Screw Top" Cells are not at hand. Send for Bulletin 37.

STANLEY & PATTERSON, 23 Murray St., New York

NOTE.—*Battery Cells to fit* **"PATTERSON" WIRELESS DRY BATTERY HOLDERS** *are now regularly manufactured by all prominent makers of Dry Cell Batteries throughout the country. When ordering Batteries simply specify that the* **"PATTERSON" SCREW TOP CELL** *is required in place of the old Binding Post Type of Cell.*

Clicquot Club Ginger Ale

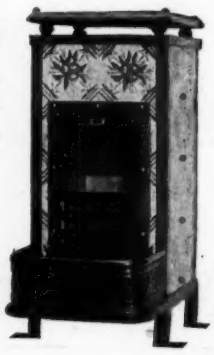
Pure Carbonated Spring Water.
The Best Ginger Root Grown.
The Purest Sugar Manufactured.

These combined in the right proportions with just a dash of pure delicious fruit flavor give to Clicquot Club Ginger Ale that distinctive flavor and sparkle for which it is famous. The purity of its ingredients and the light, clean, sanitary conditions under which it is bottled insure its keeping qualities without any added preservative. You'll appreciate its goodness when you've tried it. Insist on Clicquot Club Ginger Ale.

We also make Birch Beer, Sarsaparilla, Blood Orange, Root Beer, Lemon Soda,—all of "Clicquot" quality.

CLICQUOT CLUB CO., Millis, Mass., U.S.A.

Tile Yacht Stoves



Only suitable **stove** on the market. Of English design, tile to **harmonize** with **cabin furnishings.**

PIPE HOLE IN TOP OR BACK

Write for Circular

MURDOCK-SHAW CO.
125 FEDERAL ST.
BOSTON

English Yachting

(From page 134.)

the rule. How things will turn out this week I have no idea, for the increase of the class by the advent of the foreign boats makes a notable difference. The faster craft may be tempted to look after each other, and leave the spoils of victory to the slower. But the really disturbing element is the King of Spain's Hispania, which has been built in Spain from Mr. Fife's design, and is raced by Stephen Barbrook, of Tollesbury, and an English crew. Barbrook was in charge of the 23-metre cutter Brynhild last year, and in the course of his service worked himself into the forefront of our racing skippers. If the boat is right, I should say the odds are that he will prove just too good for Mr. Burton and the triumvirate. The honors of the festival seem to lie between Hispania, Ostara and Vanity. The old Herreshoff boat of this division, Sonya, is now in the handicap class, performing in the Village-Blacksmith sort of way—week in, week out, that is to say—that distinguished her career in better company. I have always been of opinion that Sonya is an exceptionally fast boat, but I begin to fear that the complement of her design is a man like Charles Barr.

Our 6-metre class is probably of little or no interest to Americans. Here, however, the division is rated very highly as a producer of sport, largely because its racing is international, as a rule. We had a series of 6-metre matches in the Thames last month, in which English, Irish, Scotch and Belgian craft participated. While the racing was good enough to follow, the thing that most interested me was the evidence the boats provided of the average designer's better knowledge of the International rule. The development of the type is not at all in the direction contemplated by the framers of the regulations. The palm for evasion of the rule goes, however, to the French designer of one of the Spanish 15-metre yachts. Her section is full instead of hollow, and her ends project so far that her over-all length is said to be some 6 or 7 feet greater than that of the longest of the others. Evidently the "healthly type of boat" is as far off as ever.

Although the unrestricted racers owned by the Duke of Westminster and Lord Howard de Walden have been seen out in Southampton Water—the former was also in Germany for a time—it can hardly be said truthfully that our marine motoring season has been of much account. The craze for hydroplanes, which set in last autumn and persisted all winter, has had a deal to do with this unhappy result, because, of all the craft of the skimming kind contemplated, only three have so far appeared in public. One of these is a Boulton & Paul boat, with a Norvic engine, another an Alfred Harden boat, with a Brooke engine, and the third a Thornycroft boat with a Thornycroft engine. The only one which approximates to the Ricochets in respect of speed is the Thornycroft; and though she is a workmanlike job, the idea she embodies is primitive, in the sense that it is a base from which something may be achieved in time. She has no steps and no rudder; she steers with an oar, and on a straight course did something like 22 knots. In spite of this, however, I fancy we should have all been better served if the gentlemen whose fancy lightly turned to thoughts of "skimmers" had built boats instead. Of course, we are not without new boats. There is the Thornycroft boat Gyrinus II, which did so well at Monte Carlo, and in the 6 to 8-metre class with her are Brabançonne, which has a Metallurgique motor; Lucinha, which has a Napier motor, and Secret, which has a British Bariquand & Marre motor. Secret and Brabançonne were at Monaco when Gyrinus was there.

ROBERT MACINTYRE.

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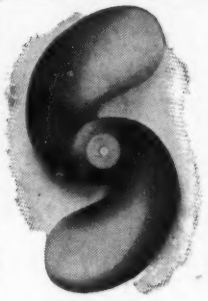
OUR ILLUSTRATED CATALOGUE
will show what you can save by purchasing from us. Send for it

ORIGINAL AND GENUINE
OLDTOWN CANOES
Introduced and made famous by us
15 TO 19 FT.

The H. H. KIFFE CO., 519 BROADWAY NEW YORK



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"Through the tangle like an eel."

You **Can't** Stick a
"Stickler" Wonderful Weedless Wheel

Free Booklet

Stickler Weedless Wheel Co., Inc.
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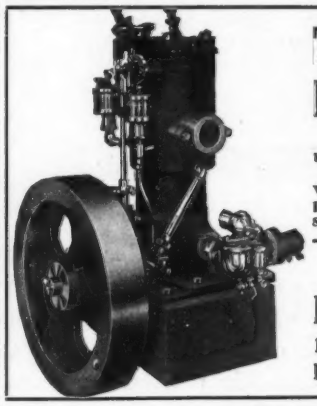

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A simple, practical up-to-date motor. The design and workmanship insure power for steady service.

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THE BEST MOTOR BUILT

SIMPLE DURABILITY AND RELIABILITY **ECONOMICAL**

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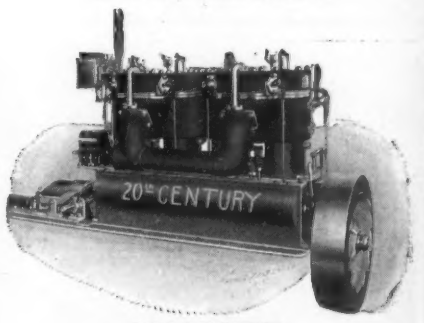

2-3-4-6 CYLINDER
10, 12, 18, 24, 30, 50, 80 and 120 H. P

Write for catalogue of our latest motors. The improvements on our 1909 machine keep it at the "top of the heap." Visit our factory and compare our motor with other makes in prices, etc.

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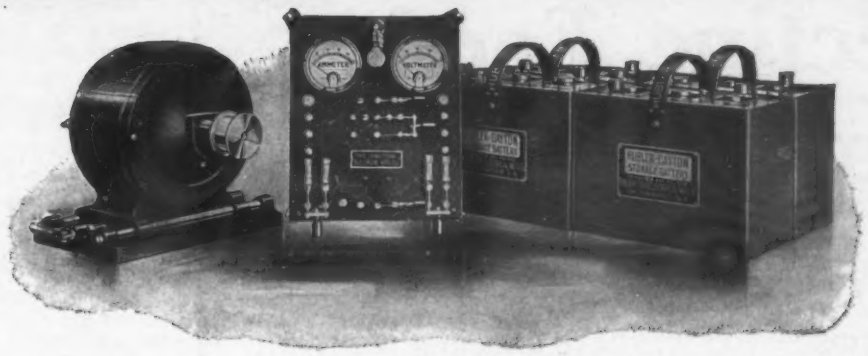

With this Lighting Outfit You Can Have A Searchlight, Starboard and Port Lights, Bow and Riding Lights, And All the Cabin Lights You Can Use. Furnished in Three Sizes, One of which Is Intended For Your Boat.

No Light Like Electricity

The progressive motor boatman now lights his boat with electricty.

Electric light is not only a perfect light for the boat—white, clear and brilliant—but is the cleanest, safest, coolest, most healthful light you can have.

Electric light in your boat will do away forever with hot, smoky, smelly oil lamps, that are a constant menace to your comfort, health and safety.

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The Dayton Launch Lighting Outfit is a complete electric lighting system, right on your boat, with everything necessary to produce all the light you need.

It consists of our Dayton Dynamo, of the same type as our famous Apple Dynamo, known everywhere for its success in marine work. The dynamo produces current, which is accumulated in the Hubler-Dayton Storage Battery, and is drawn from the battery as required by the various lights that are operated.

The whole system is controlled by a switchboard, which acts as a terminal for all wires, and gives perfect control of all lights, separately and together.

Cheaper To Operate

This is not only the most satisfactory lighting system you can have for your boat but the cheapest as well.

After the outfit is installed your expense stops. Contrast this with the constant expense for oil and breakage with old-style lamps.

Will Last a Lifetime

It is not a toy but a perfectly working outfit in every particular, thoroughly worked out and guaranteed, not only for efficiency but for durability and perfect materials and workmanship.

The Dayton Dynamo is of good size, perfectly designed for generating the amount of current needed for launch-lighting work.

The switchboard is as complete as any switchboard found in any central station plant. It has lighting circuits, ignition circuits, the finest of volt and ammeters, a theostat and an automatic cut-out.

The invention of low-voltage tungsten lamps has rendered our launch-lighting outfit possible. These lamps give a more beautiful light than lamps of equal candle power and high voltage.

Does Your Ignition Work Also

With this lighting outfit you also have an inexhaustible source of ignition current for starting, running and reverse.

This one feature has been sufficient to induce thousands of motor boat owners to equip their boats with the Apple Dynamo and the Hubler-Dayton Storage Battery. Now that the system has been enlarged and perfected to include the lighting of the boat, we expect to interest many thousands more.

Every outfit is made and tested in our own factory. We make every article used in igniting gas engines. If you desire any information on gas engines write us; our experience is at your disposal. Write to-day for complete catalogues.

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This is the most complete book ever written on the subject of "Electric Lighting for Motor Boats." We want every motor boat owner to have a copy, and have printed an edition which we trust is large enough to supply the demand. However, do not delay, but write at once for your copy. You will find it interesting and profitable.

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Also Chow-Chow, Evaporated Horseradish, India Relish, etc.

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No drugs, no artificial preservatives or coloring of any kind are used in Heinz 57. They are guaranteed to please or grocers refund money.

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Lloyd's Register for 1909

"Lloyd's Register of American Yachts" for the current year was published in June, and yachtsmen will find it of even more interest than usual. It is such a valuable record that no yacht or power boat owner can afford to be without it.

The new volume contains the particulars of 3,355 yachts, distributed over the waters of the United States, Canada and the West Indies, with a list of the names, addresses and clubs of the 3,200 owners. No fixed limit of size is followed, but such small yachts as are of more than local interest, the open launches which defend the British International Trophy and the A. P. B. A. Gold Cup, and the small sloops of the *Sonderklasse*, with other notable small yachts, are included.

Full particulars of 412 yacht clubs and twenty-five yachting associations are given, with the burgees in colors of 404 of these organizations. A special feature of the book is the collection of private signals of yacht owners, making it possible to identify a yacht whenever the flag is visible. The club list shows an increase throughout the interior of the country, where launch clubs are being formed in large numbers on the rivers and small streams previously considered unfitted for any form of yachting, and also in the extreme Northwest, in the vicinity of Vancouver, B. C., and Seattle, where yachting is gaining rapidly in popularity.

A new evidence of the widening influence of the motor boat is seen this year in the Yacht Register. The handsome and elaborate binding of blue cloth and gold which, as suited to the saloon of the large yacht or the library of the club house, has heretofore been distinctive of the book, is now supplemented by a very plain but shipshape binding in yacht canvas, at a lower price, to meet the more modest means of the owners of the small power cruiser, as well as the rougher use on small craft. Useful as it is on a yacht, to the cruiser in the small craft the Yacht Register is simply indispensable. The owner of a large yacht with professional skipper and crew is independent alike of the shore and of other vessels; the little fellow, on the other hand, is directly interested in the clubs which he may visit and the owners of the many yachts of his own class which he may meet. What he most wants to know is where the clubs are located, who the officers may be, who owns the yachts which he meets by day and anchors among by night, and from what ports and clubs they may hail. These questions, and many more like them, are answered fully and correctly in the Yacht Register.

A Good Sea Yarn

"Thrice Armed," by Harold Bindloss, is a stirring tale of the Western Coast, with strong, clean-cut characters, emphasized by that new life and sharpened by the call of the sea. It is a tale of conflict—the organization of an independent shipping company to fight a monopoly controlled by a man who had, in his unscrupulous career, wrecked the life of the hero's father, a sea captain. Of course, the son—all unaware—must needs fall in love with the rascal's daughter—material enough for many thrilling chapters. And yet, in spite of the rapid action, there is no feeling of unrest, but rather a sense of security in the final justice of this clean, clear-sighted, virile country.

From start to finish one feels the vague influence of that pioneer land—a land of infinite possibilities for the man of stout heart—a land of candor and freedom, where one breathes in the elemental forces—utter respect of brute labor as the product of strength. The fight is for the most part on sea, and is written by one who thoroughly understands his subject.

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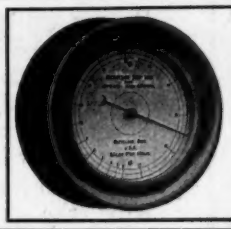

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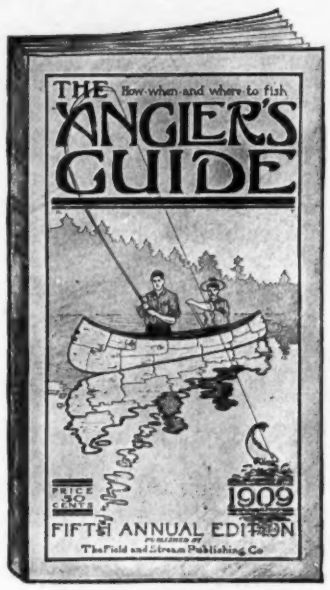

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Calendar of Yachting Events for August

August 1—
California Y. C.—August R. F. Brandes race.
Manhasset Bay Y. C.—One-design class.

August 3—
Hingham Y. C.—Open.

August 4—
Muscatine (Ia.) Launch Club.
Quincy Y. C.—Open.

August 5-6-7—
Boston Y. C., Hull—Open.
Conanicut Y. C. (R. I.)—Regatta.

August 6—
Newport Y. C.—Regatta.

August 6-7—
Macatawa Bay Y. C.

August 7—
International Trophy race.
Bellport (L. I.) Y. C.
Jubilee Y. C., Beverly, Mass.—Fourth race f Vittum Cup.
Detroit Motor Boat Club—Economy race.
New England Engine and Boat Association Annual regatta, Charles River Basin.
Royal Vancouver Y. C.—Club regatta.
Lakewood Y. C.—18-foot knockabout cl championship.
Bristol Y. C.—Regatta.
Horseshoe Harbor Y. C.—Annual.
Tappan Zee Y. C.—Open regatta for pow boats.
Corinthian Y. C., Stamford—Annual.
Northport Y. C.—Sailing and motor boat.
Winthrop Y. C.—Open.

August 8—
Cleveland Power Boat Club, Cleveland, Ohio.
Erie Basin Y. C., Brooklyn, N. Y.—Comm dore's Day races.
Pistakee Y. C.,McHenry, Ill.

August 9—
Narragansett Bay Y. R. Association, Washi ton Park Y. C.—Regatta.
Eastern Y. C., Marblehead—Special. Open.

August 10—
Edgewood Y. C.—Regatta. Possner Cup seri Second race.
Boston Y. C., Marblehead—Open.

August 11-12-13-14—
Corinthian Y. C., Marblehead—Mid-summ series.

August 11—
Muscatine (Ia.) Launch Club.
Taunton Y. C.—Regatta.
Boston Y. C., Hull—Club.

August 11-12-13—
Newport (R. I.) Y. C.—Regatta.

August 12—
Rochester (N. Y.) Y. C.—Long-distance r
Narragansett Bay Y. R. Association, Fall R Y. C.—Regatta.

August 13—
Narragansett Bay Y. R. Association, Barr ton Y. C.—Regatta.

August 14—
Ventnor Motor Boat Club.
Detroit Motor Boat Club—Club race.
Cape May (N. J.) Y. C.

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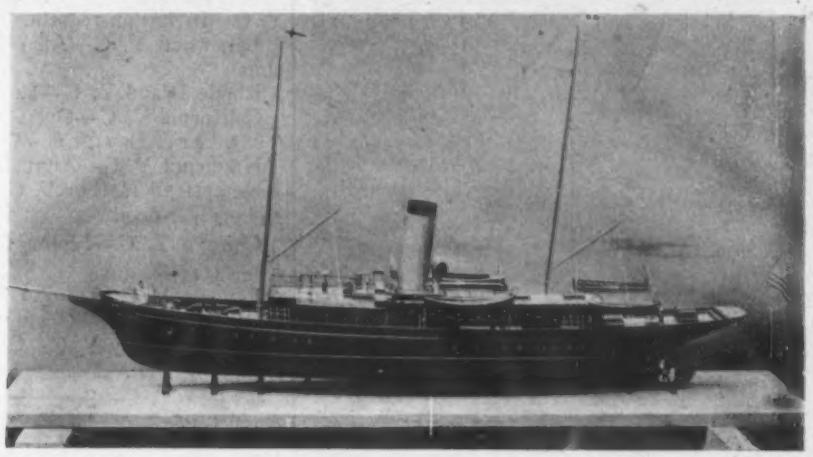

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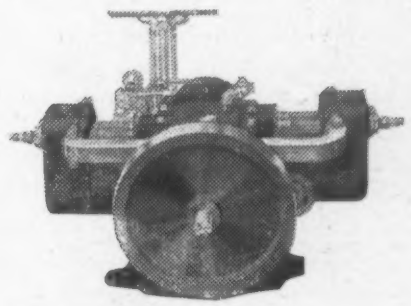

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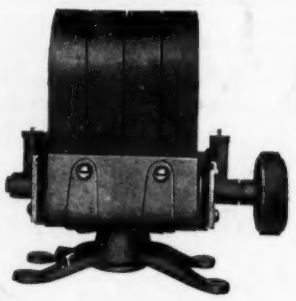

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Rhode Island Y. C.—Regatta.

California Y. C.—Open.

Manhasset Bay Y. C.—One-design class.

Huguenot Y. C.—Annual.

Hempstead Harbor Y. C.—Annual.

August 14-16-17—

Chicago Y. C.—Lipton Cup races.

August 15—

Pavonia Y. C., Jersey City, N. J.

California Y. C.—Open.

Manhasset Bay Y. C.—One-design class.

August 16-21—

Eastern Y. C.—Sonderklasse, trials.

August 17-18—

Annual regatta Western Power Boat Association at Peoria, Ill. Auspices Illinois Valley Y. C.

August 18—

Muscatine (Ia.) Launch Club.

August 21—

Independent Y. C., Northport, L. I.

Detroit Motor Boat Club—Open long distance.

Mohawk Y. C., Bridgeport, Conn.—Joint races of local clubs.

Pittsburg Launch Club.

Vancouver (B. C.) Royal Y. C.—Motor boat races.

Wildwood (N. J.) Y. C.

Great South Bay Y. R. Association—Regatta; championship series, all classes; Patchogue.

Royal Vancouver Y. C.—Final of Graveley Cup.

Rhode Island Y. C.—Brenton Reef Cup series; second race.

Tappan Zee Y. C.—Open regatta for sail boats and Cornell cups.

California Y. C.—Open.

Manhasset Bay Y. C.—One-design class.

Northport Y. C.—Motor boat.

Wallaston Y. C.—Open.

Boston Y. C., Marblehead—Club.

August 21-22—

Toledo Y. C.—Long-distance race.

South Bay Y. C., San José, Cal.

Pistakee Y. C., McHenry, Ill.

August 23—

American Y. C., Newburyport—Open.

August 23-28—

Inter-Lake Yachting Association—Regatta, Toledo.

August 24—

Stamford Y. C.—Annual.

August 25—

Bellport (L. I.) Y. C.

August 26—

Gloucester Y. C.

August 26-27-28—

Houston (Tex.) Launch Club—Third annual regatta at La Porte.

August 26-30-31—

Chicago Y. C.—Nutting Cup.

August 28—

Tappan Zee Y. C.—Power boat races.

Detroit Motor Boat Club—Club race.

Royal Vancouver Y. C.—Buscombe Cup race.

Narragansett Bay Y. R. Association, Rhode Island Y. C.—Fall regatta.

California Y. C.—Open.

Manhasset Bay Y. C.—One-design class club race.

Newport Y. C.—Annual.

New Rochelle Y. C.—Special.

Annisquam Y. C.

Holly Beach (N. J.) Y. C.—Speed races.

Cape May (N. J.) Y. C.

August 29—

California Y. C., California Bay.

Manhasset Bay Y. C.—One-design class club race.

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